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SCHOOL LIFE

Official Journal of the . . .

OFFICE OF EDUCATION

In this issue

The President's Message

Adult Education—Dimensions and Necessities
FINIS E. ENGLEMAN

Training for a Job Under MDTA
ROY W. DUGGER

FEBRUARY 1963

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Free institutions: Basis of our society

The challenges confronting American education . . . are the result of the rapid changes that have taken place in our society in the last few decades. The demands of national security and economic growth have joined our traditional concern for equality of opportunity for the individual; together they require a reassessment of the key role of education in our society. Education is not only good for the individual—it is essential to our way of life and our security. The schools and colleges and universities, the libraries and the laboratories, that have served us so well in the past must be greatly strengthened and expanded to meet their future responsibilities. We rightly take pride in the freedom and independence of these institutions. The policy of the Federal Government, in planning its part in the effort we must make as a Nation, must be such that at the end of any program, the institutions are stronger and freer than they were at the start. I am profoundly convinced that independent institutions and freedom of learning and teaching are the fundamental basis of our society.

—FRANCIS KEPPEL

From a statement before the Committee on Education and Labor, House of Representatives, February 5, 1963.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE • ANTHONY J. CELEBREZZE, *Secretary*
OFFICE OF EDUCATION . . . FRANCIS KEPPEL, *Commissioner*
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Notes on the Notable

FEDERAL PROGRAMS AND ACTIVITIES

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How are college students using their free electives?

Are college and university students in technical programs broadening their programs beyond their specialties? Are they tending, as many educators believe, to use their free electives in the humanities? Henry S. Brunner, OE specialist in agricultural education at the university level, hopes to find the answer for at least one group—students in agricultural programs. As a part of a study he is making of curriculum patterns in programs for the baccalaureate in agriculture, Dr. Brunner has asked heads of departments and student advisers to report on students' use of free electives in the areas for which they are responsible.

Dr. Brunner's study is one of a series that specialists in the Higher Education Programs Branch are making of 4-year college curriculum patterns. From time to time *School Life* will report on these studies.

NDEA technical education

NEARLY 150,000 men, women, and young people received high-skilled technical training under title VIII of the National Defense Education Act in 633 institutions last year. About 78,000 of them were studying in electronics, the most popular field. The other participants were in programs in nucleonics; instrumentation; data processing and computer programing; and mechanical, electrical aeronautical, chemical metallurgical, civil, and constructive technology.

Public high schools, junior colleges, technical institutes, and municipal colleges conduct area vocational education programs, as title VIII programs are called. Since the program began in 1958 every State has built or expanded vocational-technical institutions, and many of them have introduced technical education to junior colleges. Nearly 80 percent of the public junior colleges in the United States with enrollments of 1,000 or more now offer NDEA technical education courses.

Technical studies are offered as 2-year preparatory programs for full-time students or as upgrading and refresher courses for adults. The largest enrollment is in refresher courses—more than 95,000 employed adult workers took courses last year.

The number of students in 2-year technical study programs at the junior college level rose to 40,000 last year, an increase of more than 25 percent over the preceding year.

Secondary schools enrolled nearly 14,000 students in preparatory courses.

Education for Cuban refugees

MORE THAN 19,000 Cuban refugee children and 20,000 Cuban college students and adults are receiving help with their education from the Federal Government. Federal funds for the Cuban refugee education programs, which are being allocated by the Office of Education, totaled about $15 million at the beginning of this year. The program began in 1961 by Presidential order; it is now conducted under the Migration and Refugee Assistance Act of 1962.

Programs for children include special instruction in conversational English, conducted by the Dade County, Fla., public schools. Programs for adults include instruction in English, vocational training, professional improvement courses, and loans to college students.

Dade County has a program of English instruction and vocational training for 18,000 adults. The University of Miami is helping 150 lawyers and 300 physicians to improve their professional qualifications, and is training 30 teachers to teach in U.S. schools.

The Office of Education administers a loan program for about 1,600 Cuban students enrolled in 155 colleges and universities in the United States. These students will probably borrow about $1.2 million this fiscal year. Last fiscal year about 1,390 students borrowed $955,722 in Federal funds. Loans bear no interest.

NDEA language program

THE OFFICE OF EDUCATION recently completed negotiations for two research projects under title VI (language development) of the National Defense Education Act.

The Association of American Colleges will survey non-Western studies in liberal arts colleges in the United States. The project will examine the present state of such studies, including languages, in undergraduate colleges and will study the problems of introducing such materials into the curriculum. It will particularly study the methods and experiences of the colleges which have been the most successful in adding material on non-Western civilizations to the curriculum, through new courses or additions to existing courses.

The Association began the study on February 4, 1963, and will complete it next February. The Office's contribution to the project will be $35,000.

The Modern Language Association of America will conduct a study of undergraduate teacher training programs in modern foreign languages as compared with the advanced training offered to elementary and secondary school language teachers at National Defense Language Institutes. The study will ex-

amine both undergraduate college language training and instruction at Institutes in order to (1) assess the effect of Institute procedures on the regular academic programs at the sponsoring institution, (2) indicate the strong and weak points of college training programs today as compared with those available before 1958, and (3) determine whether college training programs have changed enough to warrant modifying the Institutes.

The study will analyze the test scores of Institute participants and reports by Institute directors and directors of college teacher training programs. A study conference of foreign language experts will evaluate these analyses. The findings of the conference will be submitted to the Office of Education and to educational and foreign language journals.

The Association began the project in January and will conclude it in August of this year. The contribution of the Office is $22,989.

Improvements through title III

MANY SCHOOL DISTRICTS in the United States are receiving help in the strengthening of their programs in science, mathematics, and modern foreign languages from title III of the National Defense Education Act. Since the act went into effect over 4 years ago, school systems in 49 States, 3 Territories, and the District of Columbia have taken part in State programs. Title III assistance is on a matching basis—for every dollar the Federal Government puts in, the State must put in another.

By the end of this fiscal year (June 30, 1963) public secondary schools will have purchased $429 million worth of instructional equipment and materials and will have remodeled 18,500 classrooms and laboratories, including 5,000 language laboratories, with title III assistance. State departments of education, by the same date, will have received $3.8 million on a matching basis for expanding their staff of specialists in science, mathematics, and modern foreign languages and for administering the program.

Under another part of the title, nonprofit private schools will at the end of this fiscal year have borrowed $3.5 million to remodel classrooms and to purchase materials and equipment.

State departments of education report that the increase in enrollments in science, mathematics, and modern foreign language courses since NDEA is greater than the proportional increase in school enrollments.

NSF will support summer conferences for college teachers

THE National Science Foundation has granted about $406,000 to 24 colleges and universities in support of conferences for college teachers of science, mathematics, and engineering in the summer of 1963. The purpose of the conferences is to strengthen the college teacher's mastery of newer developments in his field and to increase his capacity as a teacher. The 24 conferences will be 4 weeks long and will include study in biology, chemistry, computer science and programing, geology, mathematics, and physics. There will be places for about 700 teachers. Grants will cover tuition, fees, per diem, and travel.

Conference directors (not NSF) will choose participants and application must be made to them. NSF's press release 62–161 lists the institutions that will hold programs and the subjects they will teach. Obtain a copy by writing to NSF at 1951 Constitution Avenue NW., Washington 25, D.C.

NSF secondary school programs

The National Science Foundation is offering two programs for high school students of science and mathematics, the second of which also offers training to secondary school teachers: The summer training program for superior secondary-school students and the cooperative college-school science program.

The first program will make it possible for about 6,400 superior secondary school students throughout the country to receive special training in science and mathematics this summer. The training, which is more advanced than that which most secondary schools offer, will be given through 167 projects at nearly as many educational and research institutions in 41 States, the District of Columbia, and Puerto Rico. Projects will consist of classroom instruction, research under experienced scientists, or a combination of both.

Most projects are for 11th-grade students. Candidates will be selected on the basis of scholastic ability, scientific motivation, and the completion of specific high school courses in science and mathematics. Programs will run from 3 to 13 weeks. Grants will cover the cost of instruction, but not room, board, and travel expenses.

The second program will offer training in science and mathematics to 2,398 high ability secondary school students and 689 secondary school teachers. In addition, it will help selected schools in planning the improvement of science programs. Of the 44 projects to be conducted by 38 colleges, universities, and scientific research institutions, 10 will be aimed at helping school systems. The program's interest is on local cooperation between school and college, or school and institution.

The institutions conducting projects will make the selection of students and teachers, *not* NSF. To obtain the names of the institutions, write to the National Science Foundation, 1951 Constitution Avenue, NW., Washington 25, D.C., for press releases NSF–62–164 (summer training program) and NSF 62–165 (cooperative college-school science program).

Selective Service student test is set for April

THE 1963 Selective Service College Qualification Test will be offered at colleges and universities across the Nation on April 18. Selective Service Administration has distributed informational material to about 500 institutions and selective service boards which will serve as test centers. This will be the 28th test administered since the program began in 1951.

While Selective Service no longer uses detailed test scores and class standing as criteria for deferment, test scores are a valuable item of information in a registrant's file. In the case of a national emergency, test scores will be one criterion local boards will use in making deferments.

The President's Message on Education

To the Congress of the United States, January 29, 1963

EDUCATION is the keystone in the arch of freedom and progress. Nothing has contributed more to the enlargement of this Nation's strength and opportunities than our traditional system of free, universal elementary and secondary education, coupled with widespread availability of college education.

For the individual, the doors to the schoolhouse, to the library, and to the college lead to the richest treasures of our open society: to the power of knowledge—to the training and skills necessary for productive employment—to the wisdom, the ideals, and the culture which enrich life—and to the creative, self-disciplined understanding of society needed for good citizenship in today's changing and challenging world.

For the Nation, increasing the quality and availability of education is vital to both our national security and our domestic well-being. A free nation can rise no higher than the standard of excellence set in its schools and colleges. Ignorance and illiteracy, unskilled workers and school dropouts—these and other failures of our educational system breed failures in our social and economic system: delinquency, unemployment, chronic dependence, a waste of human resources, a loss of productive power and purchasing power, and an increase in tax-supported benefits. The loss of only 1 year's income due to unemployment is more than the total cost of 12 years of education through high school. Failure to improve educational performance is thus not only poor social policy, it is poor economics.

At the turn of the century, only 10 percent of our adults had a high school or college education. Today such an education has become a requirement for an increasing number of jobs. Yet nearly 40 percent of our youths are dropping out before graduating from high school; only 43 percent of our adults have completed high school; only 8 percent of our adults have completed college; and only 16 percent of our young people are presently completing college. As my Science Advisory Committee has reported, one of our most serious manpower shortages is the lack of Ph. D.'s in engineering, science, and mathematics; only about one-half of 1 percent of our school age generation is achieving Ph. D. degrees in all fields.

This Nation is committed to greater investment in economic growth; and recent research has shown that one of the most beneficial of all such investments is education, accounting for some 40 percent of the Nation's growth and productivity in recent years. It is an investment which yields a substantial return in the higher wages and purchasing power of trained workers, in the new products and techniques which come from skilled minds, and in the constant expansion of this Nation's storehouse of useful knowledge.

In the new age of science and space, improved education is essential to give new meaning to our national purpose and power. In the last 20 years, mankind has acquired more scientific information than in all of previous history. Ninety percent of all the scientists that ever lived are alive and working today. Vast stretches of the unknown are being explored every day for military, medical, commercial, and other reasons. And finally, the twisting course of the cold war requires a citizenry that understands our principles and problems. It requires skilled manpower and brainpower to match the power of totalitarian discipline. It requires a scientific effort which demonstrates the superiority of freedom. And it requires an electorate in every State with sufficiently broad horizons and sufficient maturity of judgment to guide this Nation safely through whatever lies ahead.

In short, from every point of view, education is of paramount concern to the national interest as well as to each individual. Today we need a new standard of excellence in education, matched by the fullest possible access to educational opportunities, enabling each citizen to develop his talents to the maximum possible extent.

Our concern as a nation for the future of our children—and the growing demands of modern education which Federal financing is better able to assist—make it necessary to expand Federal aid to education beyond the existing limited number of special programs. We can no longer afford the luxury of endless debate over all the complicated and sensitive questions raised by each new proposal on Federal participation in education. To be sure, these are all hard problems—but this Nation has not come to its present position of leadership by avoiding hard problems. We are at a point in history when we must face and resolve these problems.

State and local governments and private institutions, responsive to individual and local circumstances, have

admirably served larger national purposes as well. They have written a remarkable record of freedom of thought and independence of judgment; and they have, in recent years, devoted sharply increased resources to education. Total national outlays for education nearly trebled during the 1940's and more than doubled during the 1950's, reaching a level of nearly $25 billion in 1960. As a proportion of national income, this represented a rise from little more than 4 percent in 1940 to nearly 6 percent in 1960, an increase of over 40 percent in total effort.

But all this has not been enough. And the Federal Government—despite increasing recognition of education as a nationwide challenge, and despite the increased financial difficulties encountered by States, communities, and private institutions in carrying this burden—has clearly not met its responsibilities in education. It has not offered sufficient help to our present educational system to meet its inadequacies and overcome its obstacles.

I do not say that the Federal Government should take over responsibility for education. That is neither desirable nor feasible. Instead, its participation should be selective, stimulative, and, where possible, transitional.

A century of experience with land-grant colleges has demonstrated that Federal financial participation can assist educational progress and growth without Federal control. In the last decade, experience with the National Science Foundation, with the National Defense Education Act, and with programs for assisting federally affected school districts has demonstrated that Federal support can benefit education without leading to Federal control. The proper Federal role is to identify national education goals and to help local, State, and private authorities build the necessary roads to reach those goals. Federal aid will enable our schools, colleges, and universities to be more stable financially and therefore more independent.

These goals include the following:

First, we must improve the quality of instruction provided in all of our schools and colleges. We must stimulate interest in learning in order to reduce the alarming number of students who now drop out of school or who do not continue into higher levels of education. This requires more and better teachers—teachers who can be attracted to and retained in schools and colleges only if pay levels reflect more adequately the value of the services they render. It also requires that our teachers and instructors be equipped with the best possible teaching materials and curriculums. They must have at their command methods of instruction proven by thorough scientific research into the learning process and by careful experimentation.

Second, our educational system faces a major problem of quantity—of coping with the needs of our expanding population and of the rising educational expectations for our children which all of us share as parents. Nearly 50 million people were enrolled in our schools and colleges in 1962—an increase of more than 50 percent since 1950. By 1970, college enrollment will nearly double, and secondary schools will increase enrollment by 50 percent—categories in which the cost of education, including facilities, is several times higher than in elementary schools.

Third, we must give special attention to increasing the opportunities and incentives for all Americans to develop their talents to the utmost—to complete their education and to continue their self-development throughout life. This means preventing school dropouts, improving and expanding special educational services, and providing better education in slum, distressed, and rural areas where the educational attainment of students is far below par. It means increased opportunities for those students both willing and intellectually able to advance their education at the college and graduate levels. It means increased attention to vocational and technical education, which have long been underdeveloped in both effectiveness and scope, to the detriment of our workers and our technological progress.

In support of these three basic goals, I am proposing today a comprehensive, balanced program to enlarge the Federal Government's investment in the education of its citizens—a program aimed at increasing the educational opportunities of potentially every American citizen, regardless of age, race, religion, income, and educational achievement.

This program has been shaped to meet our goals on the basis of three fundamental guidelines:

A. An appraisal of the entire range of educational problems, viewing educational opportunity as a continuous lifelong process, starting with preschool training and extending through elementary and secondary schools, college, graduate education, vocational education, job training and retraining adult education, and such general community educational resources as the public library;

B. A selective application of Federal aid—aimed at strengthening, not weakening, the independence of existing school systems and aimed at meeting our most urgent education problems and objectives, including quality improvement; teacher training; special problems of slum, depressed, and rural areas; needy students; manpower shortage areas, such as science and engineering; and shortages of educational facilities; and

C. More effective implementation of existing laws, as reflected in my recent budget recommendations.

To enable the full range of educational needs to be considered as a whole, I am transmitting to the Congress with this message a single, comprehensive education bill—

the National Education Improvement Act of 1963. For education cannot easily or wisely be divided into separate parts. Each part is linked to the other. The colleges depend on the work of the schools; the schools depend on the colleges for teachers; vocational and technical education is not separate from general education. This bill recalls the posture of Jefferson:

> Nobody can doubt my zeal for the general instruction of the people. I never have proposed a sacrifice of the primary to the ultimate grade of instruction. Let us keep our eye steadily on the whole system.

In order that its full relation to economic growth, to the new age of science, to the national security, and to human and institutional freedom may be analyzed in proper perspective, this bill should be considered as a whole, as a combination of elements designed to solve problems that have no single solution.

This is not a partisan measure—and it neither includes nor rejects all of the features which have long been sought by the various educational groups and organizations. It is instead an attempt to launch a prudent and balanced program drawing upon the efforts of many past Congresses and the proposals of many Members of both Houses and both political parties. It is solely an educational program, without trying to solve all other difficult domestic problems. It is clearly realistic in terms of its cost—and it is clearly essential to the growth and security of this country.

I. The expansion of opportunities for individuals in higher education

Our present American educational system was founded on the principle that opportunity for education in this country should be available to all—not merely to those who have the ability to pay. In the past, this has meant free public elementary and secondary schools in every community—thereafter, land-grant, State, and municipal colleges, and vocational education—and more recently, job retraining and specialized teachers for students with special educational problems.

Now a veritable tidal wave of students is advancing inexorably on our institutions of higher education, where the annual costs per student are several times as high as the cost of a high school education, and where these costs must be borne in large part by the student or his parents. Five years ago the graduating class of the secondary schools was 1.5 million; 5 years from now it will be 2.5 million. The future of these young people and the Nation rests in large part on their access to college and graduate education. For this country reserves its highest honors for only one kind of aristocracy—that which the Founding Fathers called "an aristocracy of achievement arising out of a democracy of opportunity."

Well over half of all parents with school-age children expect them to attend college. But only one-third do so. Some 40 percent of those who enter college do not graduate, and only a small number continue into graduate and professional study. The lack of adequate aid to students plays a large part in this disturbing record.

Federal aid to college students is not new. More than 3 million World War II and Korean conflict veterans have received $6 billion in Federal funds since 1944 to assist them to attend college.

Additionally, the National Defense Education Act college student loan program has aided more than 300,000 students in more than 1,500 institutions who have borrowed nearly $220 million. In 4 years of operations, defaults have totaled only $700 while repayment rates are more than twice that required by law.

But as effective as this program has been, it has not fulfilled its original objective of assuring that "no student of ability will be denied an opportunity for higher education because of financial need." The institutional ceiling of $250,000 per year on the Federal contribution limits loan funds in at least 98 of the presently participating institutions. The annual statutory ceiling of $90 million on Federal appropriations restricts the size of the program. As a result, only about 5 percent of the students enrolled in participating colleges are assisted. Additionally, the forgiveness feature for teachers is rendered less attractive as well as less meaningful by excluding those who go on to teach in colleges, private schools, or on oversea military posts. This proven program must be enlarged and strengthened.

Other types of assistance are needed. For students who cannot meet the financial criteria under the NDEA loan program, a loan insurance program—drawing on techniques well established by the FHA and other Federal programs—would encourage banks and other institutions to loan more money for educational purposes.

Moreover, many students from families with limited incomes cannot and should not carry a heavy burden of debt. They must rely largely on income from employment while in college. For these students, the Federal Government should—as it did in the days of the National Youth Administration—help colleges provide additional student work opportunities of an educational character.

A serious barrier to increased graduate study is the lack of adequate financial aid for graduate students. Only 1,500 fellowships are permitted annually under the National Defense Education Act program, upon which we are dependent for urgently needed increases in the num-

(Continued on p. 22)

FINIS E. ENGLEMAN

Adult education—dimensions and necessities

At each annual conference of the American Association of School Administrators, the Adult Education Section of the Office of Education invites school administrators to attend a dinner meeting for considering the progress, prospects, and problems of adult education. This year, at Atlantic City on February 15, Finis E. Engleman was the speaker. This article is based on his address.

MAN, particularly the American, should have one all-pervading fear—the fear of becoming obsolete as a person, as a producer, and as a participant in the social, economic, ideological, and political life of his times. A sober look at the changes taking place in the contemporary world reveals that man, reaching eagerly for the future, needs not only increased understanding of civilization's past but also more penetrating insight, new knowledge, and greater skills.

Changes in aviation illustrate what is happening in almost every realm of life. Years ago I was a pilot of the early types of aircraft, and I recall that landing spots or obstacles such as mountain peaks were discernible long before they could be reached. The pilot had time to change direction, make calculations, and improvise. But today's aircraft have speeds that call not only for different instruments but also for different and changing skills. The fact that Colonel Glenn and Commander Schirra started their descent 5,000 miles from their landing spot, while I, only 45 years ago in an H 16, started mine 1 mile away is just one example out of hundreds that illustrate the new demands made on us today as a result of man's ingenuity, insight, and education.

One thing is clear: Much of the old knowledge is now inadequate in scope and quality. Some of it must be deleted as invalid; some of it must be supplemented by new knowledge. This fact suggests the danger of believing that formal education during childhood, adolescence, and early adulthood is enough to prepare men and women for a lifetime.

Modern man is fortunate in that he must always search for new knowledge, new understanding, new hypotheses, and new skills. In no other generation has man been surrounded by so many conditions that both force and permit him to scan great sweeps of recently discovered facts. Forced, because on the one hand, he is thwarted, insecure, frightened, threatened. Permitted, because on the other, he has the means of gaining new insight that gives him a loftier design for living and a feeling of security in a shifting environment. The exhilaration that comes from being perfectly poised on a single water ski exceeds that of floating astride a log.

Any discussion of adult education in America should begin with the citizen's privileges and obligations. In America the exercise of the rights and responsibilities of citizenship implies a special commitment, a special set of values, and a power to make wise, free choices which go beyond those required of citizens of most lands. Our whole concept of government rests on the principle that a government derives its just powers from the consent of the governed. The citizen of any society who claims the right to impose his consent on actions of his government is morally obligated to possess great knowledge, personal integrity, personal generosity, broad understanding, and wisdom in his choices. The self-ruler, the free-choice maker, dares not be ignorant or irresponsible lest he lose his right of self-government. At the same time, society must provide the opportunity for every individual to develop his potential and talents as a free-choice maker.

Those of us who cherish the concept of freedom and the right of independent suffrage should constantly remind ourselves that the great changes in the nature of government since the founding of the Nation require all citizens to have more knowledge and wisdom than citizens needed in 1789. Then government services were minor, and as most of them were in the local community, a citizen could vote wisely with little broad comprehensive knowledge, and could readily obtain the knowledge he needed in making decisions.

Today, the citizen who gives his consent to his government, particularly the Federal Government, needs knowl-

Dr. Engleman is the executive secretary of the American Association of School Administrators. His interest in adult education has grown steadily over the years as he has served education in many different capacities—as teacher, principal and superintendent of schools, college president, State commissioner of education for Connecticut, and a leader in many illustrious groups and organizations.

edge of history, economics, and political philosophy as well as discernment on such complex issues as the recognition of Red China, the debt limit, and medicare.

No society demands so much of its individual citizen as America does. No citizen of any other land carries so heavy a responsibility. This responsibility and privilege place on the American the stern obligation to continue his education.

But Americans most of all can accept the principle that a society should be as flexible and as subject to reforming itself as the individual is. The fact that history records the emergence, maturity, and death of one organized society after another does not prove that the future holds no hope for the continuance of the American type of democratic society. In fact, the reverse may be argued: our society's goal—which is to insure that each individual develops fully and acquires broad knowledge, a set of humanistic values, and the power to reason—provides the foundation for preserving the qualities essential to its survival. The opportunities for continuing development and education may be the keystone of the foundation.

Adult education can stimulate the imagination, confidence, inventiveness, and creative power essential to the persistence of a free society and the continued development of social, economic, and political organizations that can cope with change and yet preserve the sanctity of the individual and the democratic process. Reeducation, the giving of new vision and new insight to the adult, permits him to keep his society young in form, purpose, and operation. It is only thus that it can be kept in the insecure yet ever-developing process of maturation. It is only thus that equilibrium is maintained by a balance of old and new. It is only thus that a society can escape old age, hardened arteries, rigid behavior, and death.

BUT LET US hasten to the new demands on the American as producer and worker. Recently I read a newspaper story about a small industrial city, which said: "The technically trained elite are fully employed with high salaries while the unskilled are unemployed and economically desperate." The article went on to tell the economic story of that industrial community and its three major industrial plants. All of them had decided to become automated. One-third of the employees with technical skills and a good education were kept employed, with increased salaries. The other two-thirds, the unskilled and less well-educated, were dismissed. With new machines and one-third the former employees, production doubled.

Such situations are common, and it seems likely that demands for better educated employees will be accelerated. Mechanized and scientific farming has released manpower from the farms by the thousands, and this released manpower has filled the need for workers in our new industrial society. Only 50 years ago, 90 percent of the workers were on farms; today we really need less than 10 percent of all workers to produce farm products, but we are faced with a shortage of technicians.

But today industry needs manpower on a much higher technical and educational plane than 25 years ago. The unskilled man simply cannot compete with a bulldozer, a computer machine, or the highly automated plant. Nor can he leave the plow and be sought after by General Dynamics or the Bell Telephone Co. The wonders of technology are produced by educated men; they must be controlled, repaired, and operated by educated men; their products processed and distributed by educated men.

All this suggests that adults without a sound general education and the skills and will for further learning are in serious need and should be encouraged to continue their education. For these adults specialized retraining and educational programs will be needed in almost every community. School administrators should join hands with labor and management to keep unemployment to a minimum and to provide education for those needed for new jobs. It is true that this will be a huge undertaking and a shift from old patterns. It is true that finding money, facilities, and capable instructors will be a problem; but the costs in human misery and in lowered production will be great if such a program is not initiated.

IT WOULD be an oversight not to mention the aging. A few weeks ago, vital statistics for the United States showed for the first time that life expectancy is now 70 years. Medical and biological data support the theory that in the future man will have a much longer life span. Even now there are more than 17 million persons over 65 in this country. Many have leisure for needed education and an energy and productive power. Unless they receive the opportunity and encouragement to continue their education and service, their outlook and political action will shackle progress and handicap the citizenry.

Instead of men beyond 65 becoming a group only to be served, they must be contributors to the social and economic welfare of the Nation. Instead of being down and out, filled with apprehension, they can enter new fields of service and assume leadership with only modest retraining opportunities. The retired person should not be denied a part in local, State, and Federal programs that serve his fellowman. Educational authorities should recognize man's deep-seated desire to perform such service as well as the huge human source of power that will become available once older citizens are recruited and given brief reorientation and definitive education to develop their competencies.

The great men who have returned from retirement to serve society give fair evidence of the growing potential among those of advanced age. Who would deny that contemporary civilization has profited by elderly men such as Adenauer and Churchill? Or Ernest Melby, who has inspired thousands since his retirement?

In the light of the demands on every American and in the light of a world in explosive revolution—social, scientific, ideological, economic, and political—it is eminently clear that much of adult education must be devoted to destroying the invalid concepts and old learnings that have been proved false. First the adult must unlearn: then he must tackle the new learning, for there is no greater hindrance to progress than a generation of oldsters who know the wrong things, who can't throw outmoded ideas away.

The wonders of the physical sciences hold the headlines, but the social sciences are also discovering new knowledge and setting up new generalizations. For instance, discoveries in the field of social anthropology can do much to supplant wrong beliefs about men of many races, creeds, and cultures. Recent research in the behavorial sciences can help men understand each other, and understand they must, forced as they are by this little, congested, and interdependent world to live side by side.

ALTHOUGH the older, educationally handicapped adult is a drag on society, the young, uneducated, untrained, and culturally deprived adult, as Dr. Conant says, "is social dynamite." He, together with his ill-equipped elders, constitutes the most pressing problem in American adult education. America dare not permit 11 million functional illiterates with little or no economic productive powers and limited values to be further frustrated. For these people, a program with special teachers, special assistants, and united community resources, is necessary. The program must be comprehensive enough to meet the educational needs of the culturally handicapped adults of all ages, particularly in our metropolitan areas. This must be a community undertaking and must call on many agencies to cooperate, on public school authorities to take the initiative and leadership, and on State and Federal treasuries to provide the additional revenue needed.

The leader of the adult education program has a signal role to play in such an undertaking. Because of the philosophy back of the program—that it should help the individual adult develop his peculiar skills and talents and at the same time provide the skilled manpower the community needs—an adult education program is less rigid than formal education programs are, less bound by conformity and by the necessity to meet fixed standards. It therefore permits its leader—and possibly him alone among educational leaders—the flexibility necessary to construct the educational program essential to removing the threat of illiteracy to our society and to releasing the talents of young and old adults.

Even when man's formal education has failed to release his creative, imaginative, and inventive talents, his urge to create, to produce something that is uniquely his own, lives on. Why do women do needlepoint? Why do men want basement workshops? Why are thousands raising flowers? Possibly no greater undernourished adult potential exists than the dormant artistic and inventive talents in the older generation.

Surely what Loren Eiseley, the distinguished social scientist, says about the source of mankind's greatest strength is true: "Mathematical theory, science, the glories of art lurked hidden as the potential seeds of the universe itself, in the minds of children rocked to sleep by cave fires in the ice age of Europe." And just as surely, an education for adults should permit and encourage the release of unusual inventive powers. If these powers are to be released, I suspect the means will most likely be discovered by adult educators unfettered by the formality and rigidity which hundreds of years have imposed on the regular school programs.

Another dimension which most formal education seldom seems to achieve is what might be called a grasp of self; yet in every thoughtful man a longing persists to understand himself, to understand at one and the same time his insignificance and his divine or magnificent proportions. Through the ages nothing has been more perplexing to man than his own nature and destiny. A humble but well-defined consciousness of personal uniqueness, a deep understanding of self, give purpose to life and direction to behavior.

An educational program for those who wish to contemplate man and his peculiar dimensions and need is difficult to circumscribe or describe. But such a program is possible: the contemplations of wise men from Socrates to Toynbee can be made readily available; literature from Homer to Thoreau to Shaw contains beautifully expressed concepts of man's striving to achieve a certain destiny.

For many adults, learning for its own sake meets an innate yearning. The satisfactions of learning can compensate for many sorrows, as Merlin said to Arthur in T. H. White's *The Once and Future King:*

> The best thing for being sad is to learn something. That is the only thing that never fails. You may grow old and trembling in your anatomies, you may lie awake at night listening to the disorder of your veins, you may miss your only love, you may see the world devastated by evil lunatics, or know your honor trampled in the sewers of baser minds. There is only one thing for it then—to learn. Learn why the

> world wags and what wags it. That is the only thing which the mind can never exhaust, never alienate, never be tortured by, never fear or distrust, and never dream of regretting. Learning is the thing for you.

Not only must man learn: he must understand the world's people along with their longings. That the world now hangs on the brink of disaster few wise men will deny, nor will they deny that the greatest force in bringing it there has been man's ignorance of man. And yet, a universal man is possible—one who understands the world community and is himself a member of it—and what a master man the universal man would be! America's future may hinge on the depth of understanding in its citizens, for it is in the minds of men that peace or war, rescue or disaster, have fortress. Our strength and our leadership are shallow and unstable unless our citizens have knowledge, discernment, and appreciation of the peoples and cultures of the entire globe.

Man must also learn to evaluate the ideas with which his mind is constantly bombarded. Many men are thrown off course by the psychology and dramatics of modern communications systems. Few adults have been educated to evaluate, understand, and interpret modern advertising. The dramatic powers and skills, together with appeals to all the senses, make promotion by the mass media a challenge to the judgment, insight, and emotional balance of modern man. The average adult can profit by a program of education designed to analyze propaganda, political claptrap, or high pressure mass advertising. He can learn not only how to distinguish good products from poor but also how to discriminate between sound ideas and extreme and harmful fancies and prejudices.

And man must learn how to develop his qualities of leadership. Generally neglected but of great importance is the establishment of adult programs for government leaders at State and local levels. Educational authorities have made almost no effort to develop seminars, workshops, and study groups for school boards, city councils, local and State civil service leaders, and State legislators.

The few efforts made have been successful; for example, the 3-day prelegislative seminar organized and conducted by the State commissioner of education and the president of the State university in Maine. The seminar covered three major problems—the economic future, the educational needs from kindergarten through the graduate school, and the State's financial and taxation needs—all carefully delineated by authorities. The legislators rushed to their discussion seminars like eager graduate students. This seminar, tried in 1960 and repeated in the fall of 1962, demonstrated that lawmakers eagerly seek information which will make their decisions wise.

Officials of State departments and university professors who have conducted schools and seminars for school boards in such States as Connecticut, Illinois, and New York almost unanimously report that participants are enthusiastic. The rapid turnover of school board members indicates the need for an educational program to help fit them to bear heavy responsibilities and solve difficult problems. Without guidance, information, and a breadth of understanding of education and its complexities, they may be ineffective as statesmen and policy makers and influenced by petty prejudices in making decisions that affect not only the children and teachers but the whole Nation.

If community educational leaders, supported by public opinion, seize their opportunities and provide forward-looking programs for public servants, public officials will very likely use them eagerly. Where low level political service prevails, the public itself has low expectations. In no better way can the public be assured of superior service than by assuming that elected or appointed servants are eager for knowledge, understanding, and skill which make their services efficient, appreciated, and recognized. Perhaps the president of the community college and the local superintendent and assistant superintendent in charge of adult education have special responsibilities for initiating programs.

PRESIDENT KENNEDY recently said: "Education is both the foundation and the unifying force of our democratic way of life; it is the highest expression of achievement in our society, ennobling and enriching human life. In short, it is at the same time the most profitable investment society can make and the richest reward it can confer."

If public education is to live up to this ideal, it must be sustained by teachers, specialists, and administrators who are on the frontiers of knowledge and research and who are steeped in the cultural heritage as well. The teaching of knowledge, concepts, and dogma which no longer are valid neither creates a foundation for strength nor is a profitable investment for society or a reward to the individual. There is perhaps no greater disservice to man or nation than to teach untruths, obsolete concepts, and outmoded values.

The teaching profession is faithful to its deepest commitment only if it strives to keep its methods and content consistent with modern discoveries. The knowledge, insight, and interpretations essential to a teacher in almost all fields of knowledge a half a generation ago are inadequate today to prepare young people for life. The teacher or administrator who assumes that the education

he received in college 25 years ago, or even 10 years ago, is still adequate is unwittingly betraying his pupils and insuring ultimate distrust of the whole profession. The teacher who enters a classroom today with only the knowledge of a quarter of a century ago is like a soldier who marches boldly into battle armed with a blunderbuss or cutlass.

In some fields the first task for teachers is to reexamine the generalizations and concepts they formed in their preservice training, cast aside those no longer true, and adopt revised models. The second task is to master new knowledge. At the same time the profession must reexamine the complex configurations in which man's knowledge in many fields has been grouped and work out methods for achieving greater insight. The profession needs better understanding of the methods of research, experimentation, and inquiry that others have used, and it needs to find ways of adapting those methods to its own ends.

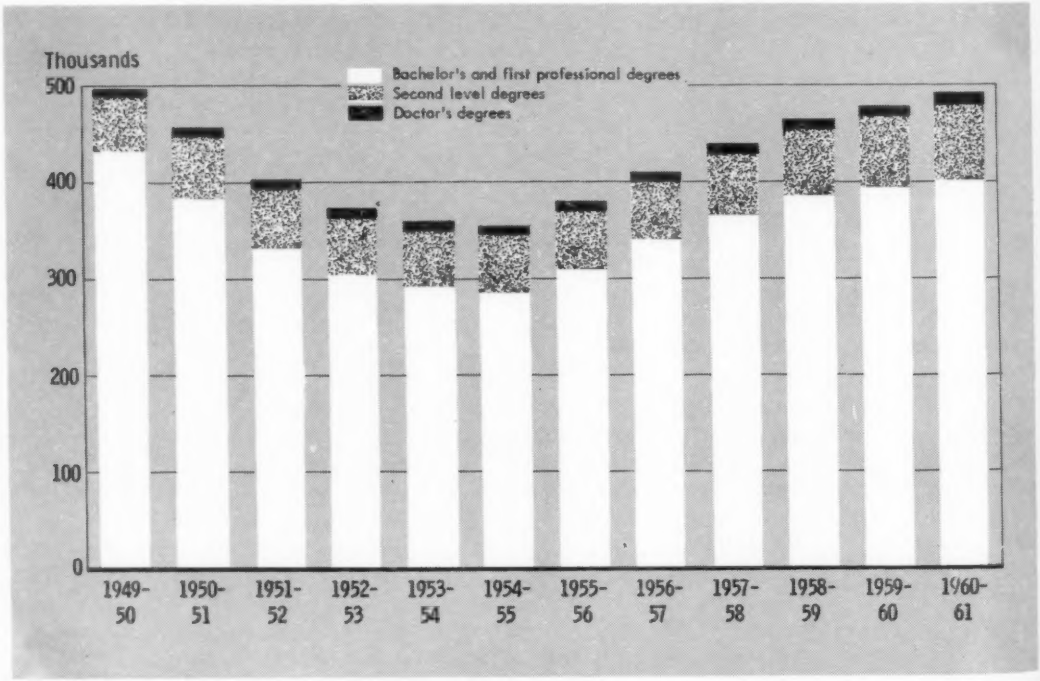
If the teacher with obsolete knowledge, skills, and understanding is dangerous to society, the superintendent or principal is far more so. Today's administrator is obligated to bring to bear all that the relevant disciplines possess on the great social, economic, and political issues and problems of the day. His must be the statesmanship that helps develop public policy. His must be the leadership that helps the staff develop the new curriculum.

The administrator should seek out not only the recent findings of research, particularly in fields where he has to make decisions, but also recent information on social, economic, scientific, philosophical, and political issues facing mankind. Through his inservice study he should acquire the knowledge most likely to throw light on these issues and to give guidance toward sound solutions.

Statistic of the Month

Earned degrees—another year, another increase

MORE MASTER'S and doctor's degrees were conferred in this country during 1960–61 than in any previous year in our history; and the number of bachelor's and first professional degrees was the second highest ever recorded (the all-time high for



Number of earned degrees conferred by institutions of higher education in the United States (the 50 States, the District of Columbia, and Puerto Rico), by level of degree, 1949–50 to 1960–61

Research findings in social anthropology, psychology, philosophy, economics, political science, history, literature, and the arts can help the administrator become an interpreter of issues, a dependable leader of his profession, and a shaper of public policy.

The colleges and universities that have assumed responsibility for the preservice education of teachers and administrators must now hurriedly accept a still greater responsibility—that of providing for the education of all in the profession. This task is much more difficult than the first, for it means the colleges and universities must make tailormade programs available.

In its desperate struggle to raise its own competencies the profession needs the support of school boards who encourage rather than discourage, who consider the education of staff members as investments guaranteed to bring in heavy dividends, just as the education of children is a good economic investment. Such boards will aid in the struggle by providing for sabbatical leaves, by encouraging workshops, conferences and similar activities, by stimulating research and writing, and by rallying public support. Unless the public as well as the teaching profession accepts the imperative need for massive continuing education for the teaching profession, education fails and the Nation is denied its rightful destiny.

THE WORLD of the past has seen man, the adult man, in a small measure master himself and in larger measure master his physical world. Only the education he seeks and finds in the future will determine his progress toward a greater destiny; only his neglect of education will lead to his decay and ultimate destruction. The catastrophic issues facing us today cannot wait for solution by a new generation. Only the adult can act today.

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this level was in 1949–50, when large numbers of veterans of World War II completed work for their baccalaureate degrees).

More women received degrees at each level in 1960–61 than in any preceding year. Women were awarded 36 percent of all bachelor's and first professional degrees, 31 percent of the master's, and nearly 11 percent of the doctor's.

The three fields which predominated at each level were as follows: Bachelor's, education 23 percent, social sciences 14 percent, business and commerce 13 percent; master's, education 44 percent, engineering 10 percent, social sciences 8 percent; and doctor's, physical sciences 19 percent, education 16 percent, and social sciences 13 percent.

Statistics on the number of degrees conferred in the United States, by major field of study, have been collected by the Office of Education every year since 1947–48. The report for each year (from July 1 to June 30) is published in a series entitled Earned Degrees Conferred. A summary report for 1960–61 has already been issued; the complete report, which will give data by individual institutions as well as an analysis of trends, will appear later this year.

—W. Vance Grant, educational statistician, Office of Education.

Number of earned degrees conferred on men and on women, by level of degree and by field of study, United States,[1] 1960–61

Field of study	Bachelor's and first professional		Second-level (master's except first professional)		Doctor's	
	Men	Women	Men	Women	Men	Women
All fields	255,599	145,514	54,459	24,481	9,463	1,112
Agriculture	4,245	68	1,001	26	404	4
Architecture	1,614	60	351	27	3	0
Biological sciences	11,895	4,264	1,804	557	1,053	140
Business and commerce	46,736	3,823	4,562	147	170	2
Education	25,681	66,687	18,915	15,495	1,384	359
Engineering	35,732	134	8,150	28	937	6
English and journalism	9,426	14,622	1,697	1,695	326	82
Fine and applied arts	5,840	7,058	1,861	1,106	260	43
Foreign languages and literature	2,389	4,135	701	681	202	61
Forestry	1,402	2	211	3	42	0
Geography	789	150	165	28	47	3
Health professions	15,442	9,345	939	718	129	4
Home economics	31	4,307	23	568	6	30
Law	9,252	262	558	28	32	0
Library science	496	1,504	85	285	14	0
Mathematical subjects	9,483	3,644	1,772	466	327	17
Merchant marine—deck officer curriculum	211	0	0	0	0	0
Military, naval, or air force science	2,577	3	16	0	0	0
Philosophy	3,225	421	301	64	129	17
Physical sciences	13,492	2,008	3,454	345	1,921	70
Psychology	5,093	3,431	1,176	543	567	136
Religion	7,328	1,476	1,015	168	228	10
Social sciences	37,722	16,562	5,097	1,300	1,233	122
Trade and industrial training	1,822	8	36	1	16	0
Other broad general curriculums and miscellaneous fields	3,676	1,540	569	202	33	6

[1] The 50 States, the District of Columbia, and Puerto Rico.

JAMES MAUCH

Education joins housing and welfare in coordinated Federal effort

Mr. Mauch, who is the Office of Education representative on the task force he reports on here, is assistant specialist, urban school system planning, Division of Elementary and Secondary Education. He came to the Office in June 1962. He has participated in several school system planning surveys, including the Boston Survey made for the Boston Public Schools and the Boston Redevelopment Authority.

THE OFFICE OF EDUCATION is taking part in a significant effort by two Federal agencies—the Housing and Home Finance Agency and the Department of Health, Education, and Welfare—to improve their services by coordinating their activities and the activities of their regional, State, and local counterparts. Both agencies conduct a wide variety of programs that serve the public throughout the country.

The enterprise was launched last March when Robert C. Weaver, Administrator of the Housing Agency, and Abraham Ribicoff, then Secretary of the Department, saw the need to mobilize their forces and coordinate housing and welfare activities, particularly in large urban areas. Both men saw that cooperation was needed in a very wide area not only at the Federal level but also at the local level. And they realized that Federal encouragement of local agencies to coordinate their activities would very likely have little effect until the Federal Government itself set the example. There were several factors pointing out the need for coordination of activities. One of the most convincing was the fact that both agencies serve many of the same persons in similar and related ways. For example, the families that public housing serves—those with low incomes—are in many instances the same families that are also served by public and private programs providing income maintenance and other supportive social service.

To carry out their plan for coordinating services, Mr. Weaver and Secretary Ribicoff established an interdepartmental joint task force composed of staff members from the divisions within their agencies that have programs to improve family life and human welfare. The Department has 22 members on the task force, including the Assistant Secretary and representatives of the Secretary's staff, the field administration, President's Committee on Juvenile Delinquency, Public Health Service, Office of Education, Vocational Rehabilitation Administration, Food and Drug Administration, Social Security Administration including Bureau of Federal Credit Unions, and Welfare Administration including Bureau of Family Services, Children's Bureau, Office of Aging, Office of Juvenile Delinquency and Youth Development, and Cuban Refugee Program. The Housing Agency has eight members representing the Public Housing Administration, the Urban Renewal Administration, and the Office of the Administrator.

This joint task force is charged with the job of finding out exactly what help people in public housing projects need, and how to coordinate efforts to provide that help more effectively. It must demonstrate, through example, better ways to provide the help—in other words, show that the new ways will work in a real situation. And finally, it will submit the whole job to an examination by people skilled in research in order to see whether the demonstration accomplished what it set out to do. The hope is that the demonstration, if successful in helping people to help themselves out of dependency, will encourage other communities to do similar things, not only in public housing developments, but in any other situation where services need to be coordinated to be more effective.

For demonstration projects, the joint task force selects housing developments in localities that have seen the need to make a determined effort to eliminate the conditions contributing to family dependency, and have taken steps to deal with them. Representatives of the task force then go to the local officials and talk over plans, common problems, and responsibilities involved in the establishment of a demonstration project. Usually, the regional and State officials concerned with the administration of health, welfare, and education programs are also included in the talks. If there is general agreement on the desirability of locating a demonstration project in the city or town and on commitments and responsibilities, the demonstration project is then begun.

One of the aims of the demonstration project is to concentrate resources in one location. And the very fact that the project exists in a city of itself attracts resources. Many agencies—public and private, Federal, regional, State, and local—become interested in the city as a place in which to invest funds in such forms as demonstration grants and technical assistance. Another attraction of a city with a demonstration project is that it has already set up the machinery necessary to effectively run and inte-

grate additional new projects, in, for example, the prevention and control of juvenile delinquency, or vocational rehabilitation.

The task force, then, operates as a catalyst. It has no funds or special financial inducements to offer to States or cities to help the program achieve its objective, but it does help to make the most effective use of the financial and technical resources available from the two Federal agencies. Its catalytic force has also been felt by the members of Department of Health, Education and Welfare and Housing and Home Finance Agency. Their constant working together has resulted in a better understanding by each of the other's programs and problems. This is especially true on the national level and in some regional offices where cooperation between the regional offices of the agencies has been encouraged and established.

Not only are the governmental agencies becoming more interested in the relationship between home environment and social services, but the local communities have had their interest aroused. When the establishment of the joint task force was announced, at least two dozen communities asked to be considered for any demonstration program which the task force set up.

For the location of its first project, the task force chose the Pruitt-Igoe housing development in St. Louis. The Governor of Missouri, John M. Dalton, and the mayor of St. Louis, Raymond Tucker, not only invited the task force to St. Louis but also enthusiastically gave their support and marshaled public support for the project:

- The Governor has instructed the directors and commissioners of various State programs to cooperate fully with this effort. The director of the Division of Welfare of Missouri has established a branch office at Pruitt-Igoe, staffed it with qualified professional employees, and reduced the individual worker's case-load to intensify the effort to reduce dependency. In addition, the Extension Division has offered to provide the service of a home agent and a youth worker.

- The mayor has appointed a 32-member planning and advisory committee broadly representative of the community to marshal support and act as policy board for the program's activities.

- The City of St. Louis with its own funds is staffing a newly created division of community services within the city's Department of Welfare. This division will develop the detailed operating plan for the provision of services including the contribution of each State, municipal, and private agency to the concerted services project.

- Washington University has accepted the responsibility for the research aspect of the project.

Against the background of the Pruitt and Igoe housing development in St. Louis, a football league has a workout. The league includes teams from the development, and from St. Louis City and St. Louis County.

For Pruitt-Igoe children, summers are full of activities sponsored by their neighborhood settlement house.

- The HEW regional office in Kansas City has assigned a person to assist the community in making maximum use of Federal resources.

- The local housing authority is making space and services available to the agencies participating in the project and has increased its staff to develop leadership and understanding among the Pruitt-Igoe residents.

- The task force has received assurances from the United States Employment Service and the President's Committee on Juvenile Delinquency of their full support and cooperation in achieving its objectives.

Even before the task force was organized, the citizens of St. Louis had recognized the need to attack problems on a concerted rather than a service-by-service basis. They recognized that, although help is generally available

to needy families from federally aided State and local programs or from private sources, not all families know the sources of help. Furthermore, because of gaps or overlaps in the work of agencies, the needs of a particular family might not be filled.

In addition to the official and public support the task force found in St. Louis, it found in Pruitt-Igoe a good location for the demonstration. Here, in a development housing 2,500 low-income families, was an opportunity to test the effectiveness of concerted services. Family income in the development is substantially lower than the U.S. average; the size of the family is larger than average; many families lack a male head; and most receive some form of public assistance. Many adults are either functionally or completely illiterate; if there is a breadwinner in the family he is usually the last hired and the first fired. Adults and young people face color bars to opportunity and decreasing opportunities as unskilled laborers. A large number of pupils drop out of high school each year, and the rate of unemployment among young people is high.

These conditions are not, of course, peculiar to Pruitt-Igoe or to St. Louis but are to be found in many cities in the United States. Where such conditions exist, many of the measures that can ameliorate them or prevent them from arising will have to come from the local public school systems. Just recently, in *Education Summary* for November 12, 1962, Raymond M. Hilliard, welfare director of Cook County (Chicago), Illinois, said, after completing a comprehensive welfare study of his county, "The problems of public welfare . . . stem from unemployment and technological and economic displacement and, most important, from the lack of basic educational skills of relief recipients which are essential to compete in our modern society."

How far the low-income families will be able to pull themselves up will depend in part on whether vocational guidance, training and retraining, and adult and literacy education are made available to them and the extent to which they take advantage of what is offered. But education has other jobs to do besides improving work skills; it should have an effect on the way people live. A concerted attempt to meet the needs of families in a low-income housing development would miss the mark if it did not enlist the local school system in programs designed to prevent problems and to raise the cultural level of the inhabitants.

For some time the St. Louis schools and other city school systems have been working on numerous programs for children and adults. Among those which cities have found successful are the following:

—daycare centers for working mothers
—the teaching of homemaking skills to the family
—guidance clinics
—activities and projects (such as a youth service corps or a work-study program) for out-of-school unemployed youth
—an expanded library program
—preschool centers to reduce gaps in cultural and learning experiences of 4- and 5-year-olds, to prepare them for the regular school program
—extended school programs (summer, Saturday, evening) to provide remedial and supplementary instruction, and cultural and recreational opportunities
—school-home visiting programs to break down barriers between teachers and parents
—improved self-governing opportunities in public housing to provide tenants with opportunities to join in civic and political affairs.

Fortunately, the public schools of St. Louis have for some time been aware of the special needs of pupils in the low-income areas of the city who may lack motivation and opportunity. In the Banneker School Area, for example, 23 elementary schools are working together to try to raise the pupils' level of aspiration and achievement. The children come from homes offering few advantages, but through a determined and devoted effort over several years, these schools—which had been considerably below the national average in language, reading, and arithmetic—now have reached, and some have passed, the national average. The attendance of the children from Pruitt-Igoe in the Banneker schools, and the experience of the St. Louis Public School System in working with families in the Housing Development, will be important contributions to the joint task force demonstration. *Look* magazine in "Big Trouble in Our City Schools," (Sept. 26, 1961) said of the Bannekar Program and its director, Samuel Shepard, "Educators from all over the country are currently looking with amazement and hope at a school program in St. Louis downtown slums."

The role of education in the concerted effort to open opportunities is recognized by the joint task force, as well as others. It is not the idea which is new, but the application of it. New demands will be placed upon public school systems to concentrate their limited resources, and they will find new ways to do so. It was probably this thought that prompted Ethel Strainchamps to introduce her article on Philip J. Hickey, school superintendent in St. Louis, with these words: "In a very real sense, the future of America's largest cities rests in the hands of the over-burdened men who run their public schools" (*Saturday Review*, November 17, 1962).

ROY W. DUGGER

Training for a job under MDTA

THE MANPOWER DEVELOPMENT AND TRAINING ACT OF 1962 (P.L. 87–415) was passed by the Congress March 13, 1962, and signed into law by the President March 15.

Its aim is to relieve unemployment caused by automation, shifts in market demands, foreign competition, and other economic changes. It recognizes that, as the skills of many Americans are becoming obsolete, the employment opportunities for trained people are increasing; and that the Federal Government, in its responsibility for strengthening the national economy and security, has a responsibility for helping to meet manpower needs.

Administration of MDTA is in the hands of two Government departments. The Secretary of Health, Education, and Welfare, through the Office of Education, administers the training programs; and the Secretary of Labor directs surveys of employment opportunities in each State and is responsible for selection of trainees, payment of training allowances, and placement. Training is planned and carried out by the local vocational education authorities with the approval of State directors of vocational education and employment security.

The act authorizes an outlay of $435 million over a 3-year period to meet costs of training and to pay training allowances. For the first 2 years up to 100 percent of certain allowable costs will be met by the Federal Government. For the fiscal year ending June 30, 1963, the Congress has appropriated a total of $70 million, including training costs and training allowances.

BY THE END of January 1963 more than 21,000 persons—men, women, and out-of-school youth—had been scheduled for training under the Manpower Development and Training Act of 1962 (MDTA), and more than 600 programs had been approved around the country.

This act was designed to help bolster the national economy by providing training that will fit people for the kinds of jobs in which there are known employment opportunities. But it is more than an economic measure in response to the cold statistics of "manpower needs" and "manpower utilization": it is being translated into efforts to help *people*, individual citizens. It has helped the oyster shucker on Chesapeake Bay to become an electronics-mechanic assembler—a worker in high demand in many labor market areas. It has turned a Missouri waitress into a practical nurse, and thus given her skills that she, too, will find in demand wherever she goes. It has taken some high school dropouts and is turning them into automobile mechanics, electrical appliance repairmen, sheet-metal workers, clerks, and stenographers. These people, and many thousands of unemployed and underemployed, come from the ranks of Americans who possess no marketable skills and who have been unable to pull their weight in a labor force adjusted to modern industrial patterns.

All the people who have been accepted so far for training under MDTA have had a basic education; they can handle the three R's and possess the intellectual and personal "equipment" that makes them particularly trainable—that is, able to learn new skills and adjust to new jobs and working conditions. Some enter their courses with a substantial background of education and training, but with the problem of skills made obsolete by technology. Some enter without any but a general foundation to build on. All of them need the special occupational training they are getting under MDTA if they are to escape becoming victims of the massive changes now taking place in the world of work.

Dr. Dugger is director of the Manpower Development and Training Program, Office of Education. He came to the Office last year from Oklahoma State University, where he was acting director of the School of Industrial Education. He has been a high school teacher; an associate professor both at Oklahoma State University and at Texas A&M College; and, under the Oklahoma State Board for Vocational Education, a supervisor for technical training services, for trade and industrial education, and for training under the Area Redevelopment Act.

A student in a practical nurse's program in Washington, D.C., under which she and her 28 classmates are getting 50 weeks of training. A hospital is their training station.

Trainees in an electronics program at the Technical Institute, Oklahoma State University, test some of their new knowledge on a transistor lab circuit analysis kit.

An instructor in a 52-week program in electrical drafting at the De Kalb Area Vocational School, Scottsdale, Ga., demonstrates a blueprint developer. Trainees between 19 and 22 years old can get up to $20 a week in training allowances.

Although it is conceivable that basic education may be provided under the act as a pretraining for the many who are not able to qualify for training in the categories where training is now being given, this kind of effort has not been practicable to date. The hard core of the unemployed, many of whom are functional illiterates, number in the millions. The $20 million set aside for training in this first year of MDTA must be spent judiciously: to get the most for our dollars, we must concentrate on skill training for people who can readily move into jobs where workers are needed. Even though MDTA is an education act as well as an economic one, it is designed to provide *vocational* education, that is, to give people skills that will earn them a living.

So far we have been able to assist only a fraction of the unemployed. It must be remembered that each trainee is selected by the public employment service after careful testing to determine his aptitudes and interests. It must also be remembered that training may be given only for those occupations in which there is a "reasonable expectation" of employment. Quality in both selection and training, however, is paying good dividends: placement of those who have completed training is high. Of the first 300 graduates, for example, almost all found jobs immediately.

As to what kinds of people are now in training, an analysis of some 6,000 trainees shows that—

About 2 in 3 are heads of families; about 1 in 3 heads of families is a woman.

About 2 in 3 are between the ages of 22 and 44.

More than half have at least a high school education; only 1 in 10 has had only an 8th grade education or less.

More than 1 in 5 has been out of work for a year or more; about half have been out of work no longer than 3 months.

These are our trainees. How they came to be selected and how their training programs took shape can be illustrated by two examples—one of a man, the other of a woman.

Mr. H has been a lifelong resident of Oklahoma City, which began to feel a crucial need for something like MDTA more than a year ago, when a meatpacking plant closed down and dismissed several hundred employees, some of whom had worked there for 20 years. Most of them, including Mr. H, who had worked there for about 10 years, were "specialists"—meat cutters, packers, and the like—and were not trained for any other occupation.

For several months Mr. H, who has a wife and three children to support, went from one odd job to another. He had registered with the local branch of the State employment service, but there was no demand for a person with meat cutting skills during that period.

Meanwhile MDTA went into effect. The State employment service began a survey of employment opportunities and employer needs throughout the State. In Oklahoma City it discovered possibilities for the employment of more than 100 trained sheetmetal workers—in businesses and industries engaged in the installation and maintenance of heating and air conditioning systems in industrial and business buildings and in private homes. The employment service reported the training needs to the State board for vocational education, which in turn requested the Technical Institute of Oklahoma State University, in Oklahoma City, to plan a training program to meet the needs.

While this was going on, the local branch of the State employment service got in touch with Mr. H, along with others whose applications it had on file. It interviewed him at length, told him about the proposed training, and, when he said he was interested, gave him a battery of general aptitude tests. He scored in the second quartile, high enough to indicate that he could handle the work in the training course for sheet metal workers.

As the prospective trainees were being screened, representatives of the State board for vocational education worked with the instructors at the Technical Institute to decide on entry requirements, needs of the industry in terms of mathematics and drafting and other related technical subjects, and the reasonable costs of training, including instructors' salaries and the cost of necessary laboratory equipment. The staff of the Technical Institute planned the courses and the budget, both subject to the approval of the State board for vocational education. (This is the procedure in every State that offers MDTA programs at the post-high-school level in a public institution.)

As soon as the training plans had been made, approved by the State, and reviewed and approved by representatives of the U.S. Office of Education, the local employment service notified the applicants it had selected and gave them a date on which to report for training.

Mr. H's program, designed to prepare trainees for sheet metal work at entry level, began almost at once, for the Institute was prepared to use some of its own instructors. For some courses, however, there may have been delays for such reasons as that the Institute could not immediately secure the needed instructors or make classroom space available.

The 26-week course in which Mr. H is enrolled includes not only training in manipulative skills but also study of related mathematics and technical subjects. It has been carefully designed to equip him to enter work in sheet metal layout and installation.

But it is preparing him for something more, too. When he has completed the course, he will have sufficient background to enter the Institute's night classes in the technology of environmental control, which can lead to an associate degree.

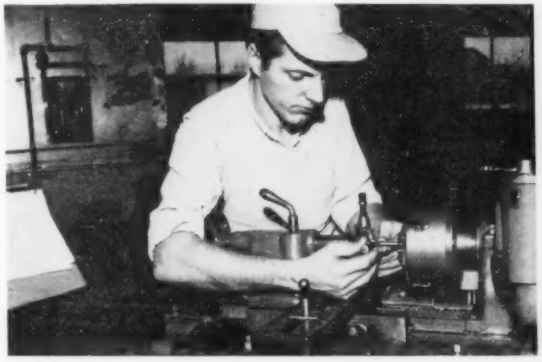
The second case history is that of Mrs. A, an unemployed 35-year-old widow, who lives in a small town outside Louisville, Ky., in Jefferson County. She married at 17, and never earned her high school diploma.

She, too, had registered with the local branch of the State employment service, seeking any kind of work that would enable her to support her family. The only likelihood of steady, remunerative employment in her community seemed to be in the State mental hospital, the newly established geriatric hospital, and several new nursing homes.

But work in psychiatric wards or in geriatrics requires highly specialized training. Even the general nurse's aide or ward attendant is not sufficiently qualified. Both hos-

A corner of a classroom in South Bend, Ind., where 25 students are enrolled in a 48-week course in mechanical drafting, which includes such subjects as applied geometry, lettering, orthographic projection, and pictorial drawing.

One of 90 trainees in a 48-week program in Baltimore in machine tool operations. At Public School 419 he is learning manipulative skills and getting instruction in such related subjects as mathematics, blueprint reading, and English.



pitals faced a serious problem in procuring the competent trained workers they needed, either male or female; the nursing homes, which provide many hospital services, had a similar problem.

When the State employment service uncovered these needs, it recommended an MDTA training program. The State director of vocational education informed the vocational education authorities in Jefferson County that such a program should be established, and arrangements were made through the State board for the training to be given in the Central State Hospital.

The training program is rigorous. It is scheduled to run for 13 weeks, in contrast to the 3 to 6 weeks usually required of nurse's aides, and will concentrate on the care of psychiatric and geriatric patients.

Mrs. A has been selected as a trainee. She will be instructed in methods of assisting in the care of these special patients in a manner conducive to their safety and comfort. She will learn how to follow the instructions given by nurses, to observe hospital and home-care routines, to be aware of and report a patient's adverse reactions to treatment, and to use tact and judgment in all situations.

There are many job opportunities waiting for women who complete such training as Mrs. A's. The institutions for which her training program was developed pay good entry rates and offer fringe benefits; the State mental hospital, which requires its employees to spend a certain period on probation and to pass a merit board examination, has a retirement plan. Meanwhile, as an unemployed head of family, she is drawing a training allowance roughly equivalent to what the State pays as unemployment compensation.

At first Mrs. A was not sure that she would be interested in this kind of work. But the battery of tests she was given by the employment service revealed that she had a high aptitude for and interest in social service. Like many people who are not familiar with medical and psychiatric work, Mrs. A had some misgivings at first about training for work in a hospital or nursing home. But a visit to the hospitals and nursing homes in Louisville led Mrs. A to realize that proper and understanding care of persons with mental disorders can do a great deal to rehabilitate them. She now looks forward to her work. What is more, her newly chosen field is one in which needs are urgent and employment opportunities are growing rapidly.

The wide difference between the fields of work in these two case histories is a clue to the fact that under MDTA no occupation is ruled out. It is conceivable that *if the employment opportunities exist,* training may be offered in *any* occupational category at *any* level of learning. There is a limit set on the period for which a trainee can receive training allowances—52 weeks is the maximum—but none has been set on the length of the training period except that it be reasonable and consistent with the occupation.

A few examples will indicate the wide range of occupations for which persons are now being trained.

Several States have sought help from the Office of Education in planning training for agricultural or farm-related occupations. California recently instituted programs for 100 unemployed persons with a variety of backgrounds to train them as pruners, trimmers, and disease-control specialists in orchards and groves. In one New Jersey program people with little or no experience with machinery are being trained to operate farm tractors; for most of them, Spanish is the first language.

The fact that training programs reflect the indigenous industries of the communities is apparent almost everywhere. In the island tourist meccas, for example—in Puerto Rico, the Virgin Islands, and Hawaii—programs are offered to train room clerks, chambermaids, formal waiters, bilingual stenographers, carpenters, ornamental iron workers, and operators of embroidery machines.

At present, about 67 percent of the training is being offered in industrial occupations; about 20 percent in clerical occupations; about 8 percent in health occupations, a field which includes nurse's aides, practical nurses, technicians, and psychiatric aides; 4 percent in distributive occupations; and 1 percent in agriculture. In all these general classifications the demand for trained competent workers is high almost everywhere. But training is being provided too for less commonplace occupations, such as boat and ship building, in West Virginia.

To the individual trainee, his program is locally inspired and locally executed. From his vantage point in the community he is able to see the beginning and the conclusion of the training plan as it affects him, a private citizen. He knows that the local vocational educational authorities planned the program and are conducting it, that the local employment service selected him and will make every effort to see that he gets the kind of job he trained for.

But what took place *before* his program began, though he may not be aware of it, represents an all-out exercise in cooperation between Federal and State governments, and among the agencies within each that have any part in administering MDTA.

First, there was planning in Washington, between the Department of Health, Education, and Welfare and the Department of Labor, to pave the way. Then there were consultations between the Federal agencies and the State directors of vocational education and the State offices of

employment security, to establish channels of communication and work out operating procedures.

Federal aid for training the unemployed

Several acts of Congress authorize the Federal Government to help State and local governments either to train their unemployed and underemployed for the many jobs now awaiting skilled labor or to bring their functionally illiterate to the point where they are ready for vocational training.

▶The Manpower Training and Development Act of 1962 (P.L. 87–415), discussed by Dr. Dugger in this issue.

▶The Area Redevelopment Act of 1961 (P.L. 87–27), which was passed to help certain areas of the country—areas suffering from substantial and persistent unemployment—to plan and finance their economic redevelopment. Part of this act provides funds for the training of unemployed and underemployed residents of these areas; training periods may be for as much as 16 weeks. The assistance is provided through the State vocational education authorities under terms similar to those in the Manpower Development and Training Act.

▶The George-Barden Act of 1946, which in section 102.74 provides for "pre-employment" classes for adults and for young persons over the age of 14 who have left school. These are the "Type C" programs; they are among the most dramatic and least heralded of our manpower training programs. They enroll both the unemployed and the underemployed and train them for jobs in which employment opportunities exist. Over 56,000 were enrolled in 1962—13,000 more than in 1961. Some States give unemployment compensation to trainees during training periods.

▶The community work and training program established by the Public Welfare Amendments of 1962 (P.L. 87–543). This program aims at improving the employability of the recipients of public assistance, many of whom are functionally illiterate. The program calls for a coordinated effort that includes education, providing the individual with constructive work experience, training, counseling and guidance, and job-placement services. It both complements and supplements the foregoing programs.

A national advisory committee, made up of representatives of labor, agriculture, education, business, industry, and the lay public was appointed in keeping with the terms of the act. And a training agreement was drawn up that would be signed by the Secretary of Health, Education, and Welfare with the individual States to empower them to conduct approved training programs.

Policy directives had to be worked out. Reporting forms had to be devised, screened, and approved. Funds had to be apportioned among the States on the basis of population and unemployment rates, as the act prescribes. A system of reporting had to be established to keep the Congress up to date on progress.

But this is only part of it. Most of the States and many local communities have established their own advisory committees. In addition, coordinating committees, made up of representatives of Federal and State employment and vocational education services have been helping to unite all agencies and groups at all levels into one smoothly working team.

State employment services have defined labor market areas, have conducted surveys to determine what occupations offer opportunities for trained workers, and have classified people looking for jobs and kept them in mind for the various training opportunities that come up. The vocational education authorities have been at work devising sound training programs in the categories identified by the employment service as those in which job opportunities exist for trained people; and, to enable courses to begin as soon as possible, have found teachers and worked out time schedules with the schools. Now many communities are beginning to make long-range estimates of their training needs and long-range plans for accommodating prospective trainees.

Forty-nine States, the District of Columbia, Puerto Rico, and the Virgin Islands and Guam are now signatories to the training agreement. Forty-eight States and three Territories have approved training plans. In those States which began early—most notably, Connecticut, California, and Pennsylvania—so many programs have been approved that commitments of funds for training have reached the maximum, and several other States are close to the limits of their allotments.

To bring the MDTA program to its present pace, a herculean effort has been expended by my own staff in the Manpower Development and Training Program of the Office of Education and by personnel in the Department of Labor. The States, too, which are even closer to the ranks of the unemployed and underemployed, have pushed hard to move ahead.

What this legislation has done above all is to make us—government and citizens alike—acutely aware that there

is much yet to be done. This one act is no panacea. It cannot of itself solve our peculiar problem of unemployment in the face of economic expansion. In cannot of itself solve the problem of the unemployed who are not educated sufficiently to be trained for a vocation.

But MDTA has brought isolated efforts together into one massive effort. It has shown that there is a common denominator in our local and regional aspirations: it has shown that nationwide goals are of necessity based on community goals because we are, after all, one people.

President Kennedy

(*Continued from p. 7*)

ber of college teachers and the number of graduate students pursuing other courses essential to the Nation's advancement and security. The National Science Foundation has broad authority for fellowships and training grants, but its program, too, has been restricted by limited appropriations. The President's Science Advisory Committee has predicted that the dramatically increasing demand for engineers, mathematicians, and physical scientists will require that the output of Ph. D.'s in these fields alone be increased 2½ times, to a total of 7,500 annually by 1970, and that the number of master's degrees awarded annually be substantially increased. In all fields the need exceeds the supply of doctoral recipients. The shortage is particularly acute in college teaching, where at present rates the Nation will lack 90,000 doctoral degree holders by 1970. It is clearly contrary to the national interest to have the number of graduate students limited by the financial ability of those able and interested in pursuing advanced degrees. Fellowship programs can ease much of the financial burden and, most importantly, encourage and stimulate a fuller realization and utilization of our human resources.

The welfare and security of the Nation require that we increase our investment in financial assistance for college students both at undergraduate and graduate levels. In keeping with present needs and our traditions of maximum self-help, I recommend that the Congress enact legislation to—

1. Extend the National Defense Education Act student loan program, liberalize the repayment forgiveness for teachers, raise the ceiling on total appropriations, and eliminate the limitation on amounts available to individual institutions.

2. Authorize a supplementary new program of Federal insurance for commercial loans made by banks and other institutions to college students for educational purposes.

3. Establish a new work-study program for needy college students unable to carry too heavy a loan burden, providing up to half the pay for students employed by the colleges in work of an educational character—as, for example, laboratory, library, or research assistants.

4. Increase the number of National Defense Education Act fellowships to be awarded by the Office of Education from 1,500 to 12,000, including summer session awards.

5. Authorize a thorough survey and evaluation of the need for scholarships or additional financial assistance to undergraduate students so that any further action needed in this area can be considered by the next Congress.

6. In addition, as part of this program to increase financial assistance to students, the 1964 budget recommendations for the National Science Foundation, which are already before the Congress, include a proposed increase of $35 million to expand the number of fellowships and new teaching grants for graduate study from 2,800 in 1963 to 8,700 in fiscal 1964.

II. Expansion and improvement of higher education

Aid to college students will be to no avail if there are insufficient college classrooms. The long-predicted crisis in higher education facilities is now at hand. For the next 15 years, even without additional student aid, enrollment increases in colleges will average 340,000 each year. If we are to accommodate the projected enrollment of more than 7 million college students by 1970—a doubling during the decade—$23 billion of new facilities will be needed, more than three times the quantity built during the preceding decade. This means that, unless we are to deny higher education opportunities to our youth, American colleges and universities must expand their academic facilities at a rate much faster than their present resources will permit.

In many colleges, students with adequate modern dormitories and living quarters—thanks to the College Housing Act—are crammed in outmoded, overcrowded classrooms, laboratories, and libraries. Even now it is too late to provide these facilities to meet the sharp increases in college enrollment expected during the next 2 years. Further delay will aggravate an already critical situation.

I recommend, therefore, the prompt enactment of a program to provide loans to public and nonprofit private institutions of higher education for construction of urgently needed academic facilities.

The opportunity for a college education is severely limited for hundreds of thousands of young people because there is no college in their own community. Studies in-

dicate that the likelihood of going to college on the part of a high school graduate who lives within 20 to 25 miles of a college is 50 percent greater than it is for the student who lives beyond commuting distance. This absence of college facilities in many communities causes an unfortunate waste of some of our most promising youthful talent. A demonstrated method of meeting this particular problem effectively is the creation of 2-year community colleges—a program that should be undertaken without delay and which will require Federal assistance for the construction of adequate facilities.

I recommend, therefore, a program of grants to States for construction of public community junior colleges.

There is an especially urgent need for college level training of technicians to assist scientists, engineers, and doctors. Although ideally one scientist or engineer should have the backing of two or three technicians, our institutions today are not producing even one technician for each three science and engineering graduates. This shortage results in an inefficient use of professional manpower—the occupation of critically needed time and talent to perform tasks which could be performed by others—an extravagance which cannot be tolerated when the Nation's demand for scientists, engineers, and doctors continues to grow. Failure to give attention to this matter will impede the objectives of the graduate and postgraduate training programs mentioned below.

I recommend, therefore, a program of grants to aid public and private nonprofit institutions in the training of scientific, engineering, and medical technicians in 2-year college-level programs, covering up to 50 percent of the cost of constructing and equipping as well as operating the necessary academic facilities.

Special urgency exists for expanding the capacity for the graduate training of engineers, scientists, and mathematicians. The President's Science Advisory Committee has recently reported that an unprecedented acceleration in the production of advanced degrees is immediately necessary to increase our national capability in these fields. Added facilities, larger faculties, and new institutions are needed. I have recommended, therefore, in the proposed 1964 budget already before the Congress, a strengthening of the National Science Foundation matching grant program for institutions of higher education to expand and improve graduate and undergraduate science facilities.

Because today's trend in colleges and universities is toward less lecturing and more independent study, the college and university library becomes even more essential in the life of our students. Today, as reported by the American Library Association, nearly all college libraries are urgently in need of additional books, periodicals, scientific reports, and similar materials to accommodate the growing number of students and faculty. Additionally, they need buildings, equipment, and publications to serve their academic communities, whether public or private.

I recommend the authorization of Federal grants to institutions of higher education for library materials and construction, on a broad geographic basis, with priority to those most urgently requiring expansion and improvement.

Expansion of high quality graduate education and research in all fields is essential to national security and economic growth. Means of increasing our supply of highly trained professional personnel to match the rapidly growing demands of teaching, industry, government, and research warrants our interest and support.

We need many more graduate centers, and they should be better distributed geographically. Three-quarters of all doctoral degrees are granted by a handful of universities located in 12 States. The remaining States with half our population produce only one-fourth of the Ph. D.'s.

New industries increasingly gravitate to or are innovated by strong centers of learning and research. The distressed area of the future may well be one which lacks centers of graduate education and research. It is in the national interest to encourage establishment of these critically needed centers of advanced learning, especially in parts of the Nation now lacking them.

I recommend enactment of a Federal grant program administered by the Department of Health, Education, and Welfare for the development and expansion of new graduate centers. I also urge appropriation of the increased funds requested in my 1964 budget for expansion of the National Science Foundation program of science development grants, which will also contribute to strengthening of graduate education.

Our experience under the National Defense Education Act with respect to modern language and area centers has demonstrated that Federal aid can spur development of intellectual talent. They deserve our continuing support, with assurance that resources will be available for orderly expansion in keeping with availability of teaching talent.

I recommend that the current modern foreign language program aiding public and private institutions of higher learning be extended and expanded.

III. Improvement of educational quality

A basic source of knowledge is research. Industry has long realized this truth. Health and agriculture have established the worth of systematic research and development. But research in education has been astonishingly

meager and frequently ignored. A fraction of 1 percent of this Nation's total expenditures for education is now devoted to such research. It is appalling that so little is known about the level of performance, comparative value of alternative investments, and specialized problems of our educational system—and that it lags behind, sometimes by as much as 20 or even 50 years, in utilizing the results of research and keeping abreast of man's knowledge in all fields, including education itself.

Highest priority must be given to strengthening our educational research efforts, including a substantial expansion of the course content improvement programs which the Government has supported, particularly through the National Science Foundation. Two interrelated actions are necessary:

1. I have recommended appropriations in the 1964 budget for substantially expanding the National Science Foundation science and mathematics course materials program and the Office of Education educational research program.

2. I recommend legislation to broaden the Cooperative Reseach Act to authorize support of centers for multipurpose educational research, and for development and demonstration programs; and to broaden the types of educational agencies eligible to conduct research.

The second step to improvement of educational quality is teacher training. The quality of education is determined primarily by the quality of the teacher. Yet one out of every five teachers in the United States has either not been certified by his State as qualified to teach or failed to complete 4 years of college study. In the field of English, between 40 and 60 percent of the secondary-school teachers lack even the minimum requirement of a college major in that subject. Thus it is not surprising that, largely because of unsatisfactory elementary and secondary school instruction, our colleges and universities are now required to spend over $10 million annually on remedial English courses.

The lack of teacher quality and preparation in other fields is equally disturbing. More than two-thirds of our 1.6 million teachers completed their degree work more than 5 years ago. Yet, within the past 5 years, major advances have been made—not only in the physical, biological, engineering, and mathematical sciences, but also in specialized branches of the social sciences, the arts and humanities, and in the art of teaching itself.

In addition, we lack sufficient trained teachers for 6 million handicapped children and youth, including 1.5 million mentally retarded and another 1.5 million with very serious social and emotional problems. Only through special classes, taught by specially trained teachers, can these children prepare for rehabilitation, employment, and community participation. Yet less than one-fourth of these children now have access to the special education they require, primarily because of the lack of qualified special teachers, college instructors, research personnel, and supervisors. It is estimated that 75,000 special teachers—55,000 more than presently available—are needed for the mentally retarded alone.

The teacher training support programs of the National Science Foundation and the Office of Education have demonstrated their value.

I recommend, therefore:

That the National Science Foundation program for training institutes for teachers in the natural sciences, mathematics, engineering, and social sciences be expanded to provide for upgrading the knowledge and skills of 46,000 teachers, as provided in my 1964 budget recommendations;

That new legislation be enacted to (a) broaden authority for teacher institutes financed by the Office of Education, now restricted to school guidance counselors and language teachers, to other academic fields; (b) authorize a program of project grants to help colleges and universities improve their teacher preparation programs by upgrading academic courses and staff, by encouraging the selection and retention of their most talented prospective teachers, and by attracting and training teachers from new sources such as retired military personnel or women whose family responsibilities permit them to teach; and (c) authorize training grants through colleges and universities for teachers and other education personnel requiring specialized training, with particular emphasis on the training of teachers of the mentally retarded and other handicapped children, teachers of gifted or culturally deprived children, teachers of adult literacy, librarians, and educational researchers.

IV. Strengthening public elementary and secondary education

Improved research and teacher training are not enough, if good teachers do not choose to teach. Yet present salary schedules in some cases are too low at the start to compete against other positions available to college graduates. In almost all cases, they are too low at the top to retain our ablest young teachers. Without sufficient incentive to make teaching a lifetime career, teachers with valuable training and experience but heavy family responsibilities too often become frustrated and drop out of the profession. Their children may never try to enter. Although teachers' salaries have generally improved in the Nation in recent years, there are still districts which have starting salaries below $3,000.

Good teachers, moreover, need good schools. Last year, over 1,500,000 children were in overcrowded classrooms and an estimated 2 million others were studying amid grossly substandard health and safety conditions. In many areas of the country school dropouts, the economically disadvantaged, the culturally deprived, the physically or mentally handicapped, and the gifted require specially designed programs which simply are not available.

I am not the first, but I hope to be the last, President to be compelled to call these needless shortcomings to the Nation's attention. These are national problems crossing State boundaries, and deserving of national attention. In our mobile population—where every year one out of five families moves, sometimes across the street, but often across State lines—every family has reason to make teaching in every State a more rewarding and productive profession, and to help every State strengthen its public elementary and secondary education, particularly in those school districts that are financially unable to keep up.

Yet let us face the fact that the Federal Government cannot provide all the financial assistance needed to solve all of the problems mentioned. Instead of a general aid approach that could at best create a small wave in a huge ocean, our efforts should be selective and stimulative, encouraging the States to redouble their efforts under a plan that would phase out Federal aid over a 4-year period.

I recommend, therefore, a 4-year program to provide $1.5 billion to assist States in undertaking under their own State plans selective and urgent improvements in public elementary and secondary education including: (1) increasing starting and maximum teacher salaries, and increasing average teacher salaries in economically disadvantaged areas; (2) constructing classrooms in areas of critical and dangerous shortage; and (3) initiating pilot, experimental, or demonstration projects to meet special educational problems, particularly in slums and depressed rural and urban areas.

I also recommend extension of the National Defense Education Act programs which contribute to improving the quality of elementary and secondary education. Grants for testing, guidance, and counseling programs should be expanded and continued beyond the 1964 expiration date. This program has great relevance for the detection of incipient problems which inhibit learning and for development of the talents of our youth. NDEA assistance for science, mathematics, and foreign language laboratory equipment—which is essential for adequate educational programs using newly developed teaching methods—should also be continued beyond 1964.

Finally, in regard to elementary and secondary schools, I recommend a 4-year continuation of those portions of the federally affected area laws which expire June 30, 1963. These statutes now assist some 4,000 school districts located in every State, which together enroll one-third of all public elementary and secondary school pupils in the Nation. Almost 60,000 critically needed classrooms have been constructed at a cost of $1.15 billion to house more than 1,700,000 pupils; and school-operating budgets have been supplemented by more than $1.7 billion. For fiscal 1964 the present provisions would be extended. Limited modifications of the existing provisions, which would take effect beginning in 1965, would overcome certain inequities demonstrated by past experience. Also, the District of Columbia should be added to the jurisdictions eligible to participate.

V. Vocational and special education

Since the wartime administration of President Woodrow Wilson, Congress has recognized the national necessity of widespread vocational education. Although revised and extended frequently since 1917, the National Vocational Education Acts are no longer adequate. Many once-familiar occupations have declined or disappeared and wholly new industries and jobs have emerged from economic growth and change. The complexities of modern science and technology require training at a higher level than ever before.

For this reason, 2 years ago I requested the Secretary of Health, Education, and Welfare to convene an expert and representative committee to review and evaluate the present vocational education laws and to make recommendations for their modernization. The report of that committee shows the need for providing new training opportunities—in occupations which have relevance to contemporary America—to 21 million youth now in grade school who will enter the labor market without a college degree during the 1960's. These youth—representing more than 80 percent of the population between the ages of 16 and 21—will be entering the labor market at a time when the need for unskilled labor is sharply diminishing. It is equally necessary to provide training or retraining for the millions of workers who need to learn new skills or whose skills and technical knowledge must be updated.

Both budgetary action and enactment of new legislation is called for. In my 1964 budget I have recommended funds which would permit doubling the number of workers to be trained by the Manpower Development and Training Act programs. These programs have, in their brief existence, already enrolled more than 18,000 men, women, and out-of-school youths who are being trained in occupations where jobs are available.

In addition, I recommend legislation to—

(a) Expand the scope and level of vocational edu-

cation programs supported through the Office of Education by replacing the Vocational Education Act of 1946 with new grant-in-aid legislation aimed at meeting the needs of individuals in all age groups for vocational training in occupations where they can find employment in today's diverse labor markets, and

(b) Provide employment and training opportunities for unemployed youth in conservation and local public service projects. The details of this latter proposal are contained in a separate bill—the Youth Employment Opportunities Act—and will be discussed in a later message to be sent to the Congress.

VI. Continuing education

Education need not and should not end upon graduation at any level. An increasing number of Americans recognize the need and the value of continuing education. The accountant, the salesman, the merchant, the skilled and semiskilled workers, all interested in self-improvement, should all be afforded the opportunity of securing up-to-date knowledge and skills. Only one American in eight has even taken as much as one college course. Yet the State universities and land-grant colleges which offer the majority of extension or part-time courses enroll less than a half million people. Due to inadequate finances and facilities, these colleges can offer only a very limited adult education program. I recommend legislation authorizing Federal grants to States for expanding university extension courses in land-grant colleges and State universities. Despite our high level of educational opportunity and attainment, nearly 23 million adult Americans lack an eighth grade education. They represent a staggering economic and cultural loss to their families and the Nation. I recommend again, as part of this comprehensive bill, a program to assist all States in offering literacy and basic education courses to adults.

The public library is also an important resource for continuing education. But 18 million people in this Nation still have no access to any local public library service and over 110 million more have only inadequate service.

Advanced age, lack of space, and lack of modern equipment characterize American public library buildings in 1963. Their rate of replacement is barely noticeable: 2 percent in a decade. There are now no Carnegie funds available for libraries—nor have there been for 40 years.

The public library building is usually one of the oldest governmental structures in use in any community. In one prosperous Midwestern State, for example, 30 percent of all public library buildings were built before the year 1910, and 85 percent were erected before 1920. Many other States are in a similar situation.

I recommend enactment of legislation to amend the Library Services Act by authorizing a 3-year program of grants for urban as well as rural libraries and for construction as well as operation.

VII. Conclusion

In all the years of our national life, the American people—in partnership with their governments—have continued to insist that "the means of education shall forever be encouraged," as the Continental Congress affirmed in the Northwest Ordinance. Fundamentally, education is and must always be a local responsibility, for it thrives best when nurtured at the grassroots of our democracy. But in our present era of economic expansion, population growth, and technological advance, State, local, and private efforts are insufficient. These efforts must be reinforced by national support, if American education is to yield a maximum of individual development and national well being.

The necessity of this program does not rest on the course of the cold war. Improvement in education is essential to our Nation's development without respect to what others are doing. Nevertheless, it is worthwhile noting that the Soviet Union recognizes that educational effort in the 1960's will have a major effect on a nation's power, progress, and status in the 1970's and 1980's. According to a recent report prepared for the National Science Foundation, Soviet institutions of higher education are graduating three times as many engineers and four times as many physicians as the United States. While trailing behind this country in aggregate annual numbers of higher education graduates, the Soviets are maintaining an annual flow of scientific and technical professional manpower more than twice as large as our own. At the same time, they have virtually eliminated illiteracy, with a 23-fold increase since the turn of the century in the proportion of persons with an education beyond the seventh grade. This Nation's devotion to education is surely sufficient to excel the achievements of any other nation or system.

The program here proposed is reasonable and yet far reaching. It offers Federal assistance without Federal control. It provides for economic growth, manpower development, and progress toward our educational and humanitarian objectives. It encourages the increase of the knowledge, skills, attitudes, and critical intelligence necessary for the preservation of our society. It will help keep America strong and safe and free. I strongly recommend it to the Congress for high priority action.

JOHN F. KENNEDY.

Summary of the Administration's Bill for Education

The Administration's bill for education, "a bill to strengthen and improve educational quality and educational opportunities in the Nation," was introduced in the House of Representatives (H.R. 3000) and the Senate (S. 580) on January 29, 1963, the same day the President sent the Congress his message on education, which appears elsewhere in this issue. The following summary was prepared in the Office of Education, by the Office of Program and Legislative Planning.

TITLE I. Expansion of opportunities for individuals in higher education. (*Students in public and private nonprofit educational institutions are eligible.*)

Part A. Student loans (amends title II of NDEA). Provides for up to $135 million in 1964* (the ceiling for 1963 is $90 million); thereafter, through 1970, "such sums as the Congress may determine." Beginning with 1967 the sums will be limited to what is necessary to enable students who already had loans by June 30, 1966, to complete their education. Extends forgiveness of up to 50 percent of loan to all teachers—elementary, secondary, college and university. Provides for a national study of why able students fail to attend or complete college.

Part B. Student loan insurance. Provides for Federal guarantee of loans made to students by banks, colleges, universities. Maximum that can be insured for the 3-year period ending June 30, 1966, is $150 million.

Part C. Student work-study programs. Authorizes $22.5 million for 1964 and, for the next 2 years, such sums as the Congress may determine to pay one-half of the wages of needy students employed part-time (up to 15 hours a week) "in work of an educational character."

Part D. Graduate fellowships (amends title IV of NDEA). Authorizes 10,000 fellowships a year for 3 years beginning in 1964, plus 2,000 summer fellowships for each year.

TITLE II. Expansion and improvement of higher education. (*Both public and private nonprofit institutions are eligible under Parts A, C, D, E, and F.*)

Part A. Construction loans. Authorizes $1 billion over 3 years for loans to institutions of higher education or higher education agencies for construction of academic facilities.

Part B. Public community colleges. Authorizes $50 million for 1964 and, for the next 2 years, such sums as the Congress may determine for grants to States to construct public community college facilities.

Part C. College-level technical education. Authorizes $20 million for 1964 and, for each of the next 6 years, such sums as the Congress may determine for grants to institutions of higher education for projects to establish or expand 2-year college-level programs of technical education. Projects may include those for construction or equipment of facilities. Grants may support up to one-half of project costs.

Part D. College libraries. Authorizes $40 million for 1964 and, for the next 2 years, such sums as the Congress may determine for grants to colleges and universities for acquiring library books and related materials and for constructing library facilities. Up to one-fourth of expenditures in 1963 for books and materials and up to one-half of construction costs can be supported by grants.

Part E. Graduate schools. Authorizes $40 million for 1964 and, for the next 6 years, such sums as the Congress may determine for grants to institutions of higher education for projects to establish or improve graduate schools, including projects for construction, equipment, or expansion of faculty. Grants may support up to one-half of project costs.

Part F. Modern foreign languages (amends title VI of NDEA). Extends for 2 years the language and area centers and studies program. Authorizes $13 million for 1964 ($5 million more than the amount authorized in 1963) and, for the next 2 years, such sums as the Congress may determine.

TITLE III. Improvement of educational quality. (*Except in Part E, both public and private nonprofit institutions are eligible.*)

Part A. Teacher institutes (amends title V and VI of NDEA). Authorizes $37.5 million for 1964 and, for the next 2 years, such sums as the Congress may determine, for institutes for advanced study. Eligible to attend and receive stipends are "individuals engaged, in the elementary or secondary schools, as teachers of gifted children or other children, as counseling and guidance personnel, library per-

*All years referred to are fiscal years, beginning July 1 and ending June 30.

sonnel, or other personnel . . . or as supervisors of such teachers or personnel" and college language teachers and college, university, and community librarians.

Part B. Teacher preparation programs. Authorizes $7.5 million for 1964 and, for the next 2 years, such sums as the Congress may determine, for grants to colleges and universities to strengthen departments and programs preparing teachers for elementary and secondary schools.

Part C. Specialized training for teachers and other related educational personnel. Authorizes $7.5 million for 1964 and, for the next 2 years, such sums as the Congress may determine, for grants to and contracts with colleges and universities for special training of teachers of the gifted, teachers of adult illiterates, counselors, librarians, and other specialized personnel.

Part D. Educational research and demonstrations (amends the Cooperative Research Act and title VII of NDEA). Authorizes the Office of Education to enter into contracts with or make grants to universities, colleges, and organizations, for research, surveys, and demonstrations; and to support research centers involving colleges and State or local education agencies. Extends the media research and demonstration program under NDEA for 2 years.

Part E. Educational statistics (amends title X of NDEA). Extends for 2 years the program of grants to State education agencies to finance collection of statistics about education. Maximum per year per State: $125,000.

TITLE IV. Strengthening elementary and secondary education.

Part A. Public education. Authorizes $400 million for 1964, $500 million for 1965, $400 million for 1966, and $200 million for 1967 for a program of grants to States to assist local educational agencies, increase teachers' salaries, construct school facilities, and undertake special projects for improving educational opportunity, particularly in economically depressed areas.

Part B. Instructional equipment for science, mathematics, and modern foreign languages (amends title III of NDEA). Extends the title for 2 years. Grants to public schools only; loans to private nonprofit schools.

Part C. Guidance, counseling, and testing (amends title V of NDEA). Extends the title for 2 years. Authorizes $17.5 million for 1964 ($2.5 million more than what was authorized for 1963) and for each of the next 2 years. Authorizes testing program for all students not below grade 7. Public schools only, except for testing in private nonprofit schools.

Part D. Federally affected areas (amends P.L. 815 and P.L. 874). Extends all expiring provisions for 4 years; in second year begins some reduction in payment formulas; in third year standardizes eligibility conditions at 5 percent; includes District of Columbia. Public schools only.

TITLE V. Vocational and special education.

Part A. Vocational education (amends Vocational Education Acts, including title VIII of NDEA). Authorizes $73 million for 1964 and, for the next 4 years, such sums as the Congress may determine. Allotments to States will be based on various age groups needing vocational education and on per capita income. State plans may continue to follow previous vocational education statutes for 2 years but must conform to new requirements by 1966. Grants under Smith-Hughes Act will continue. Public schools only.

Part B. Education of handicapped children (amends P.L. 85-926 and P.L. 87-276). Authorizes grants to State education agencies and project grants to institutions of higher education to provide special training of teachers of handicapped children; grants to institutions for scholarships to teachers of the deaf; and grants for research and demonstration projects in education of handicapped children. Both public and private nonprofit institutions are eligible. Increases the $2.5 million now authorized for mentally retarded or deaf children to $15 million for 1964; for the next 2 years authorizes such sums as the Congress may determine.

TITLE VI. Expansion of continuing education.

Part A. General university extension education. Authorizes $9,040,000 for each of 3 years beginning in 1964, for grants to States to expand university extension courses in land-grant colleges and State universities.

Part B. Adult basic education. Authorizes $5 million for 1964 and, for the next 2 years, such sums as the Congress may determine for grants to States for basic education of adults up to the 8th grade. Public schools only.

Part C. Public libraries (amends Library Services Act). Authorizes $45 million for 1964 and, for the next 2 years, such sums as the Congress may determine; expands grants to States for library services to include all areas of the State and to include construction of public library facilities.

TITLE VII. General provisions.

Defines educational institutions and agencies; provides for interchange of personnel between Office of Education and State educational agencies. Authorizes the Commissioner of Education to establish advisory councils.

AD Minutes Briefly noted---
for the busy School Administrator

Material for this department is prepared by the staff of the School Administration Branch, Division of State and Local School Systems

Principals in Florida, responding to a questionnaire from the Florida Education Association, said that they had more difficulty in 1962 than in any other year since 1958 in securing qualified teachers. They also said that more teachers resigned in 1962 than in any other year since 1959; that the number of teachers with no professional training was 48 percent higher than in 1961; that hardest to get were mathematics teachers and teachers for the first and second grades, and easiest to get were foreign language and music teachers; and that more than 2,000 teachers were teaching in their minor fields and not in their major.

"Jobs for Youth" is San Francisco's name for a committee it has asked to study the city's employment situation as it affects young people and to recommend a plan of action. As it works, the committee is coordinating the efforts of schools, placement agencies, business, industry, and labor. The chairman is Harold Spears, superintendent of schools; the committee is really a subcommittee under the large Committee on Youth, which is composed of 8 citizens at large and the heads of 8 city departments.

In surveying school budget defeats, in 1962, in New Jersey, the Association of School Business Officials came up with the following facts: the number of voters exercising their franchise averaged less than 25 percent of the total registration; only a small percentage of budgets resubmitted to voters passed; voter controversy centered on petty items, such as cost of carpeting or air-conditioning, which became the primary reason for defeating the entire budget; and the voters tended to be suspicious of budgets that were overly simplified or overly detailed.

A summer school has been established for academically talented and artistically gifted high school students in North Carolina. The school, to be housed on the Salem College Campus, Winston-Salem, will accommodate 400 high school juniors and seniors each summer. For a 3-year period it will be financed by a grant from the Carnegie Foundation and by matching funds raised by Winston-Salem business leaders. The Governor has proposed that, at the end of the 3-year period, the school be financed by State funds.

Of the Iowa teenagers who responded to a recent questionnaire on their plans after high school, 60 percent said they would continue their education; 32 percent said they would go to work; and 8 percent said they would marry and become homemakers. Sixty percent of the college-bound were planning to enter professional and semiprofessional occupations.

The questionnaire, which was completed by more than 1,500 students and their parents in southwest Iowa, showed that students underestimated the cost of room and board at their prospective colleges and overestimated the tuition fees. The average girl planned to earn 38 percent of the college costs; the average boy, 44 percent. Responses were tabulated by the Division of Administration and Finance of the Iowa State Department of Public Instruction.

Although employment opportunities in agriculture are declining steadily in Southern States, the number of students being trained in vocational agriculture in the public high schools of that region continues to increase. This trend is reported in *Jobs and Training for Southern Youth,* recently published by the Center for Southern Education Studies at Peabody College. James W. Whitlock, co-author of the booklet and former Office of Education specialist, concludes that the entire program of vocational agriculture should be reassessed and retained in the curriculum only in those high schools where employment surveys indicate a need for agricultural workers.

With formation of the New England Council for the Advancement of School Administration, New England is the first region in the Nation to undertake the improvement of administrative education on an inter-State basis. Established after a year's study by staff members of the New England Board of Higher Education and the New England Association of School Administrators, the 40-man council brings together for the first time the four groups primarily involved with school administration—practicing administrators, representatives of the colleges and universities that train them, the State departments of education that certify them, and the school boards that employ them.

The New York Board of Education has employed a specialist, Evelyn Brion, to assist in collective bargaining and related staff programs. Miss Brion has been active in industrial relations and personnel management for a number of large corporations.

SCHOOL BONDS—

Sales, Interest Rates, et cetera

A monthly report by ELMER C. DEERING, *Office of Education specialist on the financing of school facilities*

OF all the 6 years in which the Office of Education has been reporting the results of school bond elections, 1962 made the second poorest showing in the percentage of bonds approved by the voters—both school bonds and all other municipals—as the following tabulation points out. In the *amount* approved, however, 1962 was 63 percent ahead of 1961 and second only to 1960.

School bonds and other municipal bonds: amounts voted on, amounts passed, and percentage passed, 1957–62

Year	Bonds for public schools			All other municipal bonds		
	Amount voted on (millions)	Amount passed (millions)	Percent passed	Amount voted on (millions)	Amount passed (millions)	Percent passed
1957	$1,384	$1,019	73.6	$2,156	$1,714	79.5
1958	1,863	1,451	77.9	3,129	2,277	72.8
1959	2,260	1,393	61.6	1,581	1,360	86.0
1960	2,250	1,858	82.6	4,675	4,059	86.8
1961	1,318	935	70.9	2,490	1,609	64.6
1962	2,231	1,527	68.4	3,883	2,737	70.5
Total	11,306	8,183	72.4	17,914	13,756	76.8

In two of these years—1958 and 1961—school bonds fared better at the polls than other municipals and for the 6-year period as a whole they fared nearly as well as other municipals. This speaks well for school bond approvals, particularly in view of the fact that to vote school bonds usually means to increase the tax rate whereas to vote other municipal bonds does not because much of the income for debt service for other municipals is derived from service receipts.

This disadvantage to school bonds gives evidence of itself in the next two tabulations, which show that during the last 6 years 37.3 percent of all municipal bonds *passed* were for the public schools but only 29.2 percent of all municipal bonds *sold* were for the public schools.

Of all the municipal bonds voted on during that period and of all the municipal bonds passed, these percentages were for the public schools:

Year	*Percent of municipal bonds voted on that were for the public schools*	*Percent of municipal bonds passed that were for the public schools*
1957	39.1	37.3
1958	37.3	38.9
1959	58.8	50.6
1960	32.5	31.4
1961	34.6	36.8
1962	36.5	35.8
Average	38.7	37.3

During the same period, sales of school bonds in relation to sales of all municpials were as follows:

Year	*All municipal bonds (millions)*	*Bonds for public schools (millions)*	*Percent for public schools*
1957	$6,958	$2,219	31.9
1958	7,449	2,261	30.4
1959	7,681	1,903	24.8
1960	7,230	2,214	30.6
1961	8,360	2,460	29.4
1962	8,514	2,446	28.7
Total	46,192	13,503	29.2

This relationship between school bonds and other municipal bonds shows itself also in the following comparison of total amounts sold and approved by the voters during the 6-year period 1957–62:

Bonds	Sold	Approved	
		Amount	Percent of amount sold
	Billions	*Biltions*	
Public-school bonds	$13.5	$8.2	60.6
All other municipals	32.7	13.8	42.2

For all municipal bonds, 1962 was a banner year for sales. For school bonds alone it was not quite so good as 1961, which still holds the record for school bond sales; but when all the reports are in (some have been delayed past the time of this writing), 1962 may prove to be a record year.

FROM NOW ON the interest rate table in this column will be expanded to include, for the latest quarter and the latest month, a breakdown by length of term as well as by rating. In using this table the reader should bear in mind that the volume of sales for bonds maturing under

15 years and for bonds rated Aaa and Ba is relatively small, and that when these small bases for computation are divided into still smaller groups the samples may not be representative. In 1961–62 bonds maturing under 15 years averaged slightly less than $6 million per month in contrast to more than $80 million for bonds maturing in 25 years and over. And Aaa and Ba bonds respectively averaged about $6 million and $2.6 million in contrast to $45 million for Aa bonds, $66 million for A, and $33 million for Baa.

Small as its base is, a monthly average for Aaa or Ba bonds does add meaning to any report on interest rates; but the careful reader will first compare it with the annual and quarterly averages to determine whether it is exceptional or in line with the trend. For example, the two latest monthly averages for Aaa bonds are 2.53 percent and 2.68 percent—respectively 49 and 31 basis points below the corresponding monthly average for all rated bonds. In the light of the average for Aaa bonds in the last 3 years (55 basis points below the average for all bonds) and in the final quarter of 1962 (56 basis points below all bonds), the figure for February—2.68 percent—is slightly high.

Average net interest cost of Moody-rated bonds sold on the primary market for public school purposes by rating, February 1962 to February 1963

Period	Aaa	Aa	A	Baa	Ba	All rated bonds
1959–60	3.26	3.63	3.77	4.21	4.55	3.84
1960–61	2.82	3.34	3.43	3.75	3.97	3.48
1961–62	2.84	3.23	3.19	3.52	3.93	3.27
1962:						
February	2.75	3.00	3.14	3.39	3.93	3.13
March	2.80	2.99	3.07	3.34	3.89	3.20
April	2.56	2.84	2.85	3.35	3.61	2.94
May	2.56	2.95	3.03	3.34	3.80	3.13
June	2.82	2.83	3.14	3.48	3.93	3.21
July	.....	3.15	3.14	3.61	4.02	3.22
August	.....	3.02	3.08	3.43	3.82	3.17
September	2.83	2.80	3.08	3.47	3.75	3.10
October	.....	2.75	2.96	3.16	3.84	3.02
November	2.38	2.73	2.88	3.17	3.22	2.90
December	2.56	2.73	2.99	3.28	3.86	3.06
1963:						
January	2.53	2.79	3.00	3.28	3.78	3.02
February	2.68	2.72	3.01	3.25	3.73	2.99

Source: Sales reported by The Daily Bond Buyer; ratings, by Moody's Investors Service (rated bonds comprise 75–80 percent of all bonds for public school purposes).

Average net interest cost of Moody-rated bonds sold on the primary market for public school purpose, by rating and term of bond, for the latest quarter and the latest month available in 1963

Term of bond	Aaa	Aa	A	Baa	Ba	All rated bonds
	Latest quarter (Oct.–Dec. 1962)					
Under 15 years	2.29	2.49	2.47	2.73	.....	2.50
15–24 years	2.51	2.76	2.95	3.20	3.52	2.98
25 years and over	.....	2.86	3.06	3.29	3.71	3.17
All terms	2.44	2.73	2.95	3.21	3.70	3.00
	Latest month (Feb. 1963)					
Under 15 years	.....	2.23	2.61	2.52	3.10	2.40
15–24 years	2.68	2.84	2.99	3.19	.....	2.95
25 years and over	.....	2.98	3.06	3.40	3.90	3.21
All terms	2.68	2.72	3.01	3.25	3.73	2.99

Source: Sales reported by The Daily Bond Buyer; ratings, by Moody's Investors Service (rated bonds comprise 75–80 percent of all bonds for public school purposes).

INFORMATION ABOUT BONDS for colleges and universities has been appearing for some time in *Health, Education, and Welfare Indicators*, a magazine published monthly by the U.S. Department of Health, Education, and Welfare. Since 1959 it has reported results of bond elections; since 1962, the average net interest cost of bonds sold. Sales for these institutions now average about $50 million a month.

A summary of the 1962 sales for institutions of higher education will appear in the March issue of *School Life*, prepared by W. Robert Bokelman, Division of Higher Education, and Elmer C. Deering. In his analysis, Dr. Bokelman shows the purposes for which the proceeds are being used, both in privately controlled institutions and in publicly controlled. He also compares the average net interest costs under the College Housing Program with those under private financing.

Beginning in April, *School Life* will carry a separate monthly report, by Dr. Bokelman and Mr. Deering, on bonds issued by colleges and universities. The first report will summarize the first quarter of 1963 and give a brief history of the College Housing Program; subsequently they will include month-by-month lists of the institutions issuing bonds and give, for each institution, the amount of the sale, the term of the bonds, the average net interest cost, and the use to which proceeds will be put.

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Bond Sales for Public School Purposes, July 1, 1961–June 30, 1962.

By Elmer C. Deering, December 1962, 11 pp., 15 cents (OE–22009–62).

Clerical and Record Keeping Occupations: A Suggested 1-Year Curriculum.

By the Division of Vocational and Technical Education, 1962, 74 pp., 50 cents (OE–86006).

Cooperative Research Projects: Fiscal 1961.

By the Cooperative Research Branch, 1962, 92 pp., 45 cents (OE–12004–61).

Current Expenditures Per Pupil in Large Public School Systems.

By Gerald Kahn, 1962, 27 pp., 25 cents (OE–22019–60).

Digest of Annual Reports of State Boards for Vocational Education to the Office of Education: Fiscal Year Ended June 30, 1961.

By the Division of Vocational and Technical Education, 1963, 45 cents, 68 pp. (OE–80008–61).

Education Directory, 1962–1963, Part 1: State Governments.

By Louise Ratliff Murphy, 1962, 79 pp., 30 cents (OE–20004–63).

Library Statistics of Colleges and Universities, 1959–60: Part 2, Analytic Report.

By Barbara Denison and Doris C. Holladay, 1962, 45 pp., 40 cents (OE–15031–60).

Mechanical Technology, Design and Production: A Suggested 2-Year Post High School Curriculum.

By the Division of Vocational and Technical Education, 1962, 103 pp., 70 cents (Technical Education Program Series, No. 3, OE–80019).

Merit Salary Programs in Six Selected School Districts.

By James P. Steffensen, 1962, 63 pp., 30 cents (OE–23026).

Opening (Fall) Enrollment in Higher Education, 1962: Institutional Data.

By the Division of Educational Statistics, 1962, 35 pp., 30 cents (OE–54003–62).

Sabbatical Leave in American Higher Education: Origin, Early History, and Current Practices.

By Walter Crosby Eells and Ernest V. Hollis, 1962, 77 pp., 30 cents (OE–53016).

School Fires: Prevention, Control, Protection.

By R. N. Finchum and Glenn C. Boerrigter, 1962, 130 pp., 55 cents (OE–21017).

Source Materials for Secondary School Teachers of Foreign Languages.

By Esther M. Eaton, Mary E. Hayes, and Lynne L. Norton, 1962, 24 pp., 25 cents (OE–27001B).

Statistics of Higher Education, 1957–58: Faculty, Students, and Degrees.

By Edith M. Huddleston, Henry G. Badger, and Bronson Price, 1962, 165 pp., $1.25 (OE–53017–58).

Statistics of Land-Grant Colleges and Universities: Ye Ended June 30, 1960.

By George Lind, 1962, 112 pp., 70 cents (OE–50002–60).

Stenographic-Secretarial Occupations: A Suggested 1-Ye Curriculum.

By the Division of Vocational and Technical Education, 1962, pp., 45 cents (OE–86007).

Summaries of Studies in Agricultural Education: An A notated Bibliography of Studies in Agricultural Educati with Classified Subject Index.

Vocational Division Bulletin No. 300, Agricultural Series No. 1962, 51 pp., 25 cents (OE–81002–61).

Supervision for Quality Education in Science.

Reprint from *School Life*, October 1962, 35 pp., 25 cents (O 29043).

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Directory of Counselor Educators.

By Roland G. Ross, December 1962, 39 pp. (OE–25036).

Education for a Changing World of Work.

Summary Report of the Panel of Consultants on Vocational E cation requested by the President of the United States, 1962, pp. (OE–80020).

Education—Literature of the Profession.

By Lois B. Watt, August 24, 1962, 13 pp. (OE–14031–18).

Education of the Librarian for the Modern School.

By Mary Virginia Gaver, reprint from *School Life*, July 19 8 pp. (OE–15041).

The Elementary School Mathematics Library: A Selec Bibliography of Recent Titles.

By Edwina Deans, 1962, 6 pp. (OE–29040).

Lists of Books for Retarded Readers.

By Richard L. Darling, reprint from *School Life*, July 1962, 4 (OE–35042).

Periodicals Related to International Understanding.

By Lois B. Watt and Thelma M. Knuths, June 26, 1962, 6 (OE–14031–17).

Progress of Public Education in the United States of Am ica, 1961–62.

Report to the Twenty-Fifth International Conference on Pu Education, Geneva, Switzerland, July 2–13, 1962, 56 pp. (10005–62–B).

Student Infirmary Planning Aids.

By E. Eugene Higgins and Dorothy M. Jones, August 1962, 3 (OE–51004–11).

Summary Report of Financial Statistics of Institutions Higher Education, 1959–60.

By the Periodic Surveys Section, September 1962, 7 pp. (52007).

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